



Australian Government

FPI11 Forest and Forest Products Training Package

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FPI11 Forest and Forest Products Training Package

Modification History

FPI11 Modification History		
Version	Release date	Comments
2.1	30/09/2013	<p>Mapping updated to reflect non-equivalence of the following qualifications, resulting in 8 current qualifications:</p> <ul style="list-style-type: none"> • FPI20111 • FPI20211 • FPI30111 • FPI30211 • FPI20113 • FPI20213 • FPI30113 • FPI30213
2	27/08/13	<p>NSSC endorsement for:</p> <ul style="list-style-type: none"> • revision of one non-equivalent qualification due to changes to packaging rules and the removal of one core unit: • FPI60113 Advanced Diploma of Forest Industry Sustainability • revision of 4 non-equivalent qualifications in response to updating superseded core imported unit to (non-equivalent) current version following the addition of new FPI11 units to the qualification elective pool: • FPI20113 Certificate II in Forest Growing and Management • FPI20213 Certificate II in Harvesting and Haulage • FPI30113 Certificate III in Forest Growing and Management • FPI30213 Certificate III in Harvesting and Haulage • addition of five new units: • FPICOT2241 Apply wood and timber product knowledge • FPICOT3261 Transport forestry logs using trucks • FPICOT3262 Transport forestry produce using trucks • FPICOT3263 Maintain and contribute to energy efficiency • FPICOT3264 Build and maintain timber stacks • addition of two changed and equivalent units: • FPIFGM5219 Undertake carbon stock sampling of forests and

FPI11 Modification History		
Version	Release date	Comments
		<p>plantations</p> <ul style="list-style-type: none"> FPIFGM6203 Manage sustainable tree inventory. <p>ISC upgrade for:</p> <ul style="list-style-type: none"> revision of a further 17 existing equivalent qualifications to add and update units in their elective banks: FPI20311 Certificate II in Sawmilling and Processing FPI20411 Certificate II in Wood Panel Products FPI20511 Certificate II in Timber Manufactured Products FPI20611 Certificate II in Timber Merchandising FPI20711 Certificate II in Timber Truss and Frame Design and Manufacture FPI30311 Certificate III in Sawmilling and Processing FPI30411 Certificate III in Wood Panel Products FPI30511 Certificate III in Timber Manufactured Products FPI30611 Certificate III in Timber Merchandising FPI30711 Certificate III in Sawdoctoring FPI30811 Certificate III in Woodmachining FPI30911 Certificate III in Timber Truss and Frame Design and Manufacture FPI40111 Certificate IV in Forest Operations FPI40211 Certificate IV in Timber Processing FPI40311 Certificate IV Timber Truss and Frame Manufacture FPI40411 Certificate IV in Timber Truss and Frame Design FPI50111 Diploma of Forest and Forest Products minor updates to revised equivalent native units: FPICOT5206A to FPICOT5206B Implement forestry chain of custody certification system FPICOT5208A to FPICOT5208B Build and maintain community relationships FPICOT5209A to FPICOT5209B Manage tree harvesting to minimise environmental impact FPICOT6201A to FPICOT6201B Manage community engagement FPICOT6202A to FPICOT6202B Develop and manage a forestry chain of custody certification process for the workplace FPIFGM4203B to FPIFGM4203C Design plantations FPIFGM6201A to FPIFGM6201B Plan a biochar storage system for carbon capture and storage

FPI11 Modification History		
Version	Release date	Comments
		<ul style="list-style-type: none"> • FPISAW3220B to FPISAW3220C Maintain wide band saw blades • superseded imported units updated in a range of qualification elective banks • addition of sixteen skill sets: • Carbon Accounting • Finger Jointing Grader Operator • Finger Jointing Moulder Operator • Finger Jointing Plant Operator • Finger Jointing Quality Control Tester • Forestry Log Truck Driver • Forestry Produce Truck Driver • Forest & Wood Product Innovation for Leaders • Forest & Wood Product Innovation for Managers • Supporting Forest & Wood Products Innovation • Managing Change in the Forest and Wood Products Industry • Forest & Wood Products Industry Stakeholder Engagement • Supporting Workplace Engagement in the Forest and Wood Products • Leading Business Development in Forest and Wood Products • Managing Business Development in Forest and Wood Products • Supporting Business Development in Forest and Wood Products • minor editorial errors corrected throughout.
1.1	27.11.12	Spelling, typographical and alignment issues corrected Superseded imported units updated where equivalent
1	07.02.12	Primary release

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Preliminary Information

Important Note to Users

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

Check the version number before commencing training or assessment

This Training Package is Version 2.1 - check whether this is the latest version by going to the Training.gov.au (www.training.gov.au) and locating information about the Training Package. Alternatively, contact *ForestWorks* at www.forestworks.com.au to confirm the latest version number.

Explanation of version number conventions

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

Explanation of the review date

The review date (shown on the title page and in the footer of each page) indicates when the Training Package is expected to be reviewed in the light of changes such as changing technologies and circumstances. The review date is not an expiry date. Endorsed Training Packages and their components remain current until they are reviewed or replaced.

List of AQF Qualifications

Qualification Code	Title
FPI10111	Certificate I in Forest and Forest Products
FPI20111	Certificate II in Forest Growing and Management
FPI20113	Certificate II in Forest Growing and Management
FPI20211	Certificate II in Harvesting and Haulage
FPI20213	Certificate II in Harvesting and Haulage
FPI20311	Certificate II in Sawmilling and Processing
FPI20411	Certificate II in Wood Panel Products
FPI20511	Certificate II in Timber Manufactured Products
FPI20611	Certificate II in Timber Merchandising
FPI20711	Certificate II in Timber Truss and Frame Design and Manufacture
FPI30111	Certificate III in Forest Growing and Management
FPI30113	Certificate III in Forest Growing and Management

FPI30211	Certificate III in Harvesting and Haulage
FPI30213	Certificate III in Harvesting and Haulage
FPI30311	Certificate III in Sawmilling and Processing
FPI30411	Certificate III in Wood Panel Products
FPI30511	Certificate III in Timber Manufactured Products
FPI30611	Certificate III in Timber Merchandising
FPI30711	Certificate III in Sawdoctoring
FPI30811	Certificate III in Woodmachining
FPI30911	Certificate II in Timber Truss and Frame Design and Manufacture
FPI40111	Certificate IV in Forest Operations
FPI40211	Certificate IV in Timber Processing
FPI40311	Certificate IV in Timber Truss and Frame Manufacture
FPI40411	Certificate IV in Timber Truss and Frame Design
FPI50111	Diploma of Forest and Forest Products
FPI50311	Diploma of Timber Truss and Frame Manufacture
FPI50411	Diploma of Timber Truss and Frame Design
FPI60113	Advanced Diploma of Forest Industry Sustainability

FPI units

Note: There are no pre-requisite requirements for any FPI unit of competency.

Unit Code	Unit Title
FPICOR2201B	Work effectively in the forest and forest products industry
FPICOR2202B	Communicate and interact effectively in the workplace
FPICOR2203B	Follow environmental care procedures
FPICOR2204B	Follow fire prevention procedures

FPICOR2205B	Follow OHS policies and procedures
FPICOR2207B	Maintain quality and product care
FPICOR3201B	Implement safety, health and environment policies and procedures
FPICOR3202B	Conduct quality and product care procedures
FPICOR3203B	Evaluate fire potential and prevention
FPICOR3204B	Visually assess materials
FPICOR4201B	Monitor safety, health and environment policies and procedures
FPICOR4202B	Monitor and review forestry operations
FPICOR4203B	Monitor quality and product care procedures
FPICOR6201A	Manage sustainability in the workplace
FPICOR6202A	Implement practices to maximise value from wood residues
FPICOT2201B	Stack and bind material
FPICOT2202B	Rack material
FPICOT2203B	Finish products
FPICOT2205B	Tail out materials
FPICOT2207B	Dress boards and timber
FPICOT2208B	Resaw boards and timber
FPICOT2209B	Produce finger jointed timber
FPICOT2210B	Tally material
FPICOT2211B	Produce pointed timber products
FPICOT2212B	Grade hardwood sawn and milled products
FPICOT2213B	Grade softwood sawn and milled products
FPICOT2214B	Grade cypress sawn and milled products
FPICOT2215B	Visually stress grade hardwood
FPICOT2216B	Visually stress grade softwood

FPICOT2217B	Visually stress grade cypress
FPICOT2218B	Cross cut materials with a fixed saw
FPICOT2219B	Use hand-held tools
FPICOT2220B	Select trees for tending operations
FPICOT2222B	Produce laminated beams
FPICOT2223B	Segregate and sort logs
FPICOT2224B	Band edges of panels
FPICOT2225B	Chip or flake wood
FPICOT2226B	Debark logs mechanically
FPICOT2227B	Process orders and despatch products
FPICOT2228B	Store materials
FPICOT2229B	Dock material to length
FPICOT2230B	Assemble products
FPICOT2231B	Pack products
FPICOT2232B	Cut material to shape using a saw
FPICOT2233B	Navigate in forest areas
FPICOT2235A	Assess timber for manufacturing potential
FPICOT2236	Fall trees manually (basic)
FPICOT2237A	Maintain chainsaws
FPICOT2238A	Cut materials with a hand-held chainsaw
FPICOT2239A	Trim and cut felled trees
FPICOT2240	Cut materials with a pole saw
FPICOT2241	Apply wood and timber product knowledge
FPICOT3201B	Hand sharpen knives and blades
FPICOT3202B	Navigate in remote or trackless areas

FPICOT3203B	Weigh loads
FPICOT3204B	Prepare and interpret sketches and drawings
FPICOT3205B	Dress boards using multi-headed machines
FPICOT3206B	Cut material using high speed optimiser
FPICOT3207B	Set up, operate and maintain finger jointing operations
FPICOT3208B	Test strength of joints
FPICOT3209B	Set up, operate and maintain end matching operations
FPICOT3210B	Sharpen cutting tools
FPICOT3211B	Maintain sawdoctoring tools
FPICOT3212B	Replace saws, blades and guides
FPICOT3213B	Manufacture cutting tools
FPICOT3214B	Take off material quantities
FPICOT3215B	Swage and shape saw blades
FPICOT3216B	Assess and maintain saw performance
FPICOT3217B	Assess and maintain cutter performance
FPICOT3218B	Quote and interpret from manufactured timber product plans
FPICOT3219B	Produce standard truss or frame plans and details using computers
FPICOT3220B	Quote and interpret from computerised timber manufactured product plans
FPICOT3221B	Rehabilitate tracks, quarries and landings
FPICOT3222B	Present forestry information and interpretations programs
FPICOT3223B	Grade and mark logs
FPICOT3224B	Plan and monitor equipment maintenance
FPICOT3225B	Mechanically stress grade timber
FPICOT3227B	Receive and measure logs

FPICOT3228B	Plane/sand panels
FPICOT3229B	Mechanically stress grade panels
FPICOT3230B	Operate automated stacking equipment
FPICOT3231B	Operate steam boiler
FPICOT3232B	Operate heat plant
FPICOT3233B	Sharpen and align blades and knives
FPICOT3234B	Cut material using CNC sizing machines
FPICOT3235B	Machine material using CNC machining and processing centres
FPICOT3236B	Coordinate stock control procedures
FPICOT3237B	Produce templates
FPICOT3238B	Operate a pole saw
FPICOT3239B	Create drawings using computer aided design systems
FPICOT3240B	Grade heavy structural/engineered products
FPICOT3241B	Assemble timber wall frames
FPICOT3242B	Lay up timber roof trusses
FPICOT3243B	Operate a truss press
FPICOT3244B	Cut material to profile
FPICOT3245B	Grade, sort and mark material
FPICOT3246B	Test heavy structural/engineered products
FPICOT3247B	Select timber for forestry operations
FPICOT3248A	Dry timber in solar assisted kilns
FPICOT3249A	Select timber preservation techniques
FPICOT3250A	Prepare timber to meet import/export compliance requirements
FPICOT3251A	Promote the carbon benefits of wood products
FPICOT3252A	Use environmental care procedures to undertake fire salvage operations

FPICOT3253A	Convert timber residue into products for further use
FPICOT3254A	Implement environmentally sustainable work practices in the work area/work site
FPICOT3255	Apply silvicultural principles
FPICOT3256	Apply biodiversity protection principles
FPICOT3257	Follow cultural heritage requirements
FPICOT3258	Comply with soil and water protection
FPICOT3259	Operate a four-wheel drive on unsealed roads
FPICOT3260	Recover four-wheel drive vehicles
FPICOT3261	Transport forestry logs using trucks
FPICOT3262	Transport forestry produce using trucks
FPICOT3263	Maintain and contribute to energy efficiency
FPICOT3264	Build and maintain timber stacks
FPICOT4201B	Produce complex truss and frame plans and details using computers
FPICOT4202B	Design timber structures
FPICOT4203B	Plan and coordinate product assembly
FPICOT4204B	Schedule and coordinate load shifting
FPICOT4205B	Coordinate log debarking operations
FPICOT4206B	Plan and coordinate boiler operations
FPICOT4207B	Plan and coordinate heat plant operations
FPICOT5201B	Implement sustainable forestry practices
FPICOT5202B	Manage forestry information and interpretations programs
FPICOT5203B	Manage installation and commissioning of equipment
FPICOT5204B	Organise enterprise maintenance programs
FPICOT5205A	Develop biohazard contingency plans

FPICOT5206B	Implement forestry chain of custody certification system
FPICOT5207A	Implement sustainability in the workplace
FPICOT5208B	Build and maintain community relationships
FPICOT5209B	Manage tree harvesting to minimise environmental impact
FPICOT6201B	Manage community engagement
FPICOT6202B	Develop and manage a forestry chain of custody certification process for the workplace
FPICOT6203A	Develop engineered timber products to meet energy efficient building
FPICOT6204A	Use carbon accounting to estimate emissions in the workplace
FPICOT6205A	Prepare an enterprise carbon management report
FPICOT6207A	Develop forest management systems and processes
FPIFGM2201B	Collect seed
FPIFGM2202B	Prepare seedbed
FPIFGM2203B	Plant trees by hand
FPIFGM2204B	Plant trees mechanically
FPIFGM2205B	Prune trees
FPIFGM2206B	Collect data or samples for assessment
FPIFGM2207B	Undertake brushcutting operations
FPIFGM2209B	Cut, sort and set cuttings
FPIFGM2210B	Implement animal pest control procedures
FPIFGM2211B	Detect fires
FPIFGM2212B	Graft cuttings
FPIFGM2213B	Process seed
FPIFGM2214B	Maintain visitor sites
FPIFGM2215B	Measure trees

FPIFGM3201B	Manage seed collection
FPIFGM3202B	Extract seed
FPIFGM3203B	Conduct an instrument survey
FPIFGM3206B	Plan and implement non-commercial thinning operations
FPIFGM3207B	Coordinate stem improvement
FPIFGM3209B	Construct and maintain forest roads and tracks
FPIFGM3210B	Patrol forest
FPIFGM3211B	Manage coppice stems
FPIFGM3212	Fall trees manually (intermediate)
FPIFGM3213	Fall trees manually (advanced)
FPIFGM3214	Operate a four-wheel drive in a towing situation
FPIFGM3215	Perform complex four-wheel drive operations
FPIFGM4201B	Implement a forest establishment plan
FPIFGM4202B	Manage stand health
FPIFGM4203C	Design plantations
FPIFGM4204B	Conduct a pests and diseases assessment
FPIFGM4205B	Monitor regeneration rates
FPIFGM4206B	Conduct a wood volume and yield assessment
FPIFGM4207B	Conduct a forest site assessment
FPIFGM4208B	Plan a quarry
FPIFGM4209B	Interpret and use aerial photographs for forest management
FPIFGM4210B	Prepare a tender
FPIFGM5201B	Plan and manage an inventory program
FPIFGM5208B	Manage road construction and maintenance
FPIFGM5210A	Manage tending operations in a native forest

FPIFGM5211A	Coordinate stand nutrition
FPIFGM5212A	Manage genetic resources
FPIFGM5213A	Coordinate plantation tending operations
FPIFGM5214A	Develop a native forest regeneration plan
FPIFGM5215A	Breed trees
FPIFGM5216A	Manage coupe planning
FPIFGM5217A	Promote plantations as a sustainable form of land use
FPIFGM5219	Undertake carbon stock sampling of forests and plantations
FPIFGM6201B	Plan a biochar storage system for carbon capture and storage
FPIFGM6203	Manage sustainable tree inventory
FPIHAR2203B	Hook up felled logs using cables (choker)
FPIHAR2204B	Perform landing duties (chaser)
FPIHAR2205B	Conduct mobile splitting operations
FPIHAR2206B	Operate a mobile chipper/mulcher
FPIHAR2207A	Trim and cut harvested trees
FPIHAR3201B	Monitor log recovery (rigging slinger)
FPIHAR3206C	Conduct forwarder operations
FPIHAR3207C	Conduct feller buncher operations
FPIHAR3208C	Conduct boom delimeter operations
FPIHAR3210C	Conduct mechanical processor operations
FPIHAR3211B	Operate yarder
FPIHAR3213B	Conduct mechanically assisted tree falling operations
FPIHAR3214C	Operate a single grip harvester
FPIHAR3215C	Operate a heavy production mobile chipper
FPIHAR3216A	Conduct forestry operations using crawler tractor

FPIHAR3217A	Conduct skidder operations
FPIHAR3218A	Conduct loader operations
FPIHAR3219A	Conduct excavator operations with grabs
FPIHAR3220	Harvest trees manually (intermediate)
FPIHAR3221	Harvest trees manually (advanced)
FPIHAR4201B	Apply tree jacking techniques
FPIHAR4202B	Coordinate log recovery (hook tender)
FPIHAR4203B	Design log landings and snig tracks
FPIHAR4204B	Plan and coordinate fire salvage operations
FPIHAR4205B	Implement harvesting plans
FPIHAR5201B	Design harvesting plans
FPISAW2201B	Grade round poles and debarked logs
FPISAW2202B	Sort boards manually
FPISAW2203B	Sort boards mechanically
FPISAW2204B	Dock boards with mechanical feed
FPISAW2205B	Assemble materials using nail plates
FPISAW2206B	De-stack seasoning racks
FPISAW2207B	Round softwood logs
FPISAW2208B	Split wood products
FPISAW2209B	Dismantle, transport and assemble hand portable sawmill
FPISAW2210B	Prepare for timber treatment operations
FPISAW3201B	Treat timber
FPISAW3202B	Produce sawn green boards
FPISAW3203B	Break down logs
FPISAW3204B	Saw flitches and cants

FPISAW3205B	Dry hardwood
FPISAW3206B	Dry softwood
FPISAW3207B	Sharpen band saws
FPISAW3208B	Sharpen circular saws
FPISAW3209B	Align sawing production systems
FPISAW3210B	File and set saws
FPISAW3211B	Recondition guides
FPISAW3212B	Sharpen tipped circular saws
FPISAW3213B	Level and tension circular saws
FPISAW3214B	Join band saw blades
FPISAW3215B	Screen wood chips
FPISAW3216B	Transfer wood chips
FPISAW3217B	Hard face saw teeth
FPISAW3218B	Replace tungsten tips
FPISAW3219B	Replace stellite tips
FPISAW3220C	Maintain wide band saw blades
FPISAW3221B	Profile saw blanks
FPISAW3222B	Recondition band mill wheels
FPISAW3223B	Assess wood chips
FPISAW3224B	Coordinate and monitor the wood chip stockpile
FPISAW3225B	Maintain frame saw blades
FPISAW3226B	Saw logs using CNC optimising systems
FPISAW3227B	Select and saw logs in multi-species operations
FPISAW3228B	Apply principles of blade design to sawing procedures
FPISAW3229B	Operate a portable sawmill

FPISAW4201B	Plan and monitor timber treatment plant operations
FPISAW4202B	Plan and monitor saw log operations
FPISAW4203B	Coordinate timber drying operations
FPISAW4204B	Plan and monitor board conversion
FPITMM2201 B	Cut material to length and angles
FPITMM2202 B	Machine material
FPITMM2203 A	Read and interpret timber truss, floor and/or frame fabrication plans
FPITMM3201 B	Convert timber
FPITMM3202 B	Manufacture using joinery machines
FPITMM3203 B	Estimate and cost job
FPITMM3204 A	Interpret designs to prepare timber roof truss drawings and documents using computers
FPITMM3205 A	Interpret designs to prepare timber floor system drawings and documents using computers
FPITMM3206 A	Interpret designs to prepare timber wall frame drawings and documents using computers
FPITMM3207 A	Set up timber floor trusses
FPITMM4201 B	Construct prototypes and samples
FPITMM4202 B	Diagnose and calculate production costs
FPITMM4203 B	Install and commission CNC software
FPITMM4204 B	Sample and test products to specifications

FPITMM4205 A	Prepare and advise on a broad range of timber roof truss details using computers
FPITMM4206 A	Prepare and advise on a broad range of timber floor system details using computers
FPITMM4207 A	Prepare and advise on a broad range of timber wall frame details using computers
FPITMM5201 B	Assess product feasibility of designs
FPITMM5202 B	Develop, trial and evaluate prototypes
FPITMM5203 B	Generate and transfer complex computer-aided drawings and specifications
FPITMM5204 B	Manage product design
FPITMM5205 B	Optimise CNC operations
FPITMM5206 B	Plan production
FPIWPP2201B	Cut panels
FPIWPP2202B	Surface treat raw board
FPIWPP2203B	Repair veneer and ply
FPIWPP2204B	Repair veneer mechanically
FPIWPP2205B	Prepare chip or fibre blends
FPIWPP2206B	Prepare veneer for ply
FPIWPP2207B	Scarf edges of veneer
FPIWPP2208B	Cut veneer
FPIWPP2209B	Saw products from continuous ply
FPIWPP2210B	Cut panels to profile
FPIWPP2211B	Move material by transfer equipment

FPIWPP3201B	Produce veneer from debarked logs
FPIWPP3202B	Paint panels
FPIWPP3203B	Produce fibre from chips
FPIWPP3204B	Form board
FPIWPP3205B	Match and join veneer
FPIWPP3206B	Laminate and veneer board surfaces
FPIWPP3207B	Clip veneer
FPIWPP3208B	Punch peg holes in panels
FPIWPP3209B	Prepare resin and additives
FPIWPP3210B	Laminate board
FPIWPP3211B	Maintain caul plates and screens
FPIWPP3212B	Dry material
FPIWPP3213B	Heat treat material
FPIWPP3214B	Treat paper
FPIWPP3215B	Cut paper
FPIWPP3216B	Press material using the daylight process
FPIWPP3217B	Process production effluent
FPIWPP3218B	Coordinate machining of panels
FPIWPP3219B	Blend and test binding mixes
FPIWPP3220B	Plan and coordinate panel painting
FPIWPP3221B	Trim new panels to size
FPIWPP3222B	Press laminated ply
FPIWPP3223B	Immunise veneer
FPIWPP3224B	Profile sand products
FPIWPP3225B	Produce profile sanding shoes and wheels

FPIWPP3226B	Operate a continuous press
FPIWPP3227B	Vacuum paint
FPIWPP3228B	Dry wood flakes
FPIWPP3229B	Classify flake
FPIWPP3230B	Produce decorative veneers
FPIWPP3231B	Produce veneer from prepared flitches
FPIWPP4201B	Plan and coordinate panel production
FPIWPP4202B	Perform laboratory testing

Imported units

Unit Code	Unit Title	Updated in FPI11 V2.1
AHCBUS502A	Market products and services	
AHCARB204A	Undertake standard climbing techniques	
AHCARB206A	Undertake stump removal	
AHCARB307A	Undertake complex tree climbing	
AHCCHM201A	Apply chemicals under supervision	
AHCCHM303A	Prepare and apply chemicals	
AHCCHM304A	Transport, handle and store chemicals	
AHCCHM401A	Minimise risks in the use of chemicals	
AHCCHM402A	Plan and implement a chemical use program	
AHCEXP303A	Prepare and use explosives	
AHCFIR201A	Assist with prescribed burning	
AHCILM201A	Maintain cultural places	
AHCILM401A	Protect places of cultural significance	

AHCINF202A	Install, maintain and repair fencing	
AHCINF203A	Maintain properties and structures	
AHCINF303A	Plan and construct conventional fencing	
AHCIRG204A	Lay irrigation and/or drainage pipes	
AHCIRG206A	Maintain pressurised irrigation systems	
AHCIRG301A	Implement a maintenance program for an irrigation system	
AHCIRG306A	Troubleshoot irrigation systems	
AHCIRG406A	Plan on-site irrigation system installation and construction work	
AHCIRG503A	Design irrigation, drainage and water treatment systems	
AHCLSC302A	Construct landscape features using concrete	
AHCLSC304A	Erect timber structures and features	
AHCMOM301A	Coordinate machinery and equipment maintenance and repair	
AHCMOM402A	Supervise maintenance of machinery and equipment	
AHCNAR303A	Implement revegetation works	
AHCNAR402A	Plan the implementation of revegetation works	
AHCNSY201A	Pot up plants	
AHCNSY202A	Tend nursery plants	
AHCNSY203A	Undertake propagation activities	Release 2
AHCNSY301A	Maintain nursery plants	
AHCNSY302A	Receive and dispatch nursery products	
AHCNSY306A	Implement a propagation plan	
AHCNSY401A	Plan a growing-on program	

AHCNSY402A	Plan a propagation program	
AHCPGD402A	Plan a plant establishment program	
AHCPHT503A	Manage a controlled growing environment	
AHCPMG201A	Treat weeds	
AHCPMG202A	Treat plant pests, diseases and disorders	
AHCPMG301A	Control weeds	
AHCPMG302A	Control plants, pests, diseases and disorders	
AHCPMG402A	Develop a pest management action plan within a local area	
AHCPMG503A	Develop a strategy for the management of target pests	
AHCSAW201A	Conduct erosion and sediment control activities	
AHCSAW302A	Implement erosion and sediment control measures	
AHCWAT502A	Manage water systems	
AHCWRK201A	Observe and report on weather	
AHCWRK203A	Operate in isolated and remote situations	
AHCWRK302A	Monitor weather conditions	
AHCWRK304A	Respond to rescue incidents	
AHCWRK505A	Manage trial and/or research material	
BSBADM311A	Maintain business resources	
BSBAUD501B	Initiate a quality audit	
BSBCMM301B	Process customer complaints	
BSBCMM401A	Make a presentation	
BSBCMM402A	Implement effective communication strategies	
BSBCRT402A	Collaborate in a creative process	

BSBCUS301B	Deliver and monitor a service to customers	
BSBCUS401B	Coordinate implementation of customer service strategies	
BSBCUS402B	Address customer needs	
BSBCUS501C	Manage quality customer service	
BSBFIA301A	Maintain financial records	
BSBFIM501A	Manage budgets and financial plans	
BSBFLM303C	Contribute to effective workplace relationships	
BSBFLM305C	Support operational plan	
BSBFLM312C	Contribute to team effectiveness	
BSBINM201A	Process and maintain workplace information	
BSBINM301A	Organise workplace information	
BSBINM401A	Implement workplace information system	
BSBINM501A	Manage an information or knowledge management system	
BSBINN201A	Contribute to workplace innovation	
BSBINN501A	Establish systems that support innovation	
BSBINN502A	Build and sustain an innovative work environment	
BSBINN601B	Manage organisational change	
BSBINN801A	Lead innovative thinking and practice	
BSBITS401B	Maintain business technology	
BSBITU201A	Produce simple word processed documents	
BSBITU306A	Design and produce business documents	
BSBLED401A	Develop teams and individuals	
BSBLED501A	Develop a workplace learning environment	

BSBMGT402A	Implement operational plan	
BSBMGT403A	Implement continuous improvement	
BSBMGT502B	Manage people performance	
BSBMGT515A	Manage operational plan	
BSBMGT516C	Facilitate continuous improvement	
BSBMGT608C	Manage innovation and continuous improvement	
BSBMGT616A	Develop and implement strategic plans	
BSBMKG501B	Identify and evaluate marketing opportunities	
BSBPMG414A	Apply project information management and communications techniques	
BSBPMG415A	Apply project risk-management techniques	Supersedes BSBPMG407A
BSBPMG416A	Apply project procurement procedures	Supersedes BSBPMG408A
BSBPMG522A	Undertake project work	Supersedes BSBPMG510A
BSBREL701A	Develop and cultivate collaborative partnerships and relationships	
BSBRES401A	Analyse and present research information	
BSBRES801A	Initiate and lead applied research	
BSBRSK401A	Identify risk and apply risk management processes	
BSBRSK501B	Manage risk	
BSBSMB404A	Undertake small business planning	
BSBSMB406A	Manage small business finances	
BSBSUS501A	Develop workplace policy and procedures for sustainability	
BSBWHS503A	Contribute to the systematic management of	Supersedes

	WHS risk	BSBOHS504B
BSBWOR204A	Use business technology	
BSBWOR301B	Organise personal work priorities and development	
BSBWOR401A	Establish effective workplace relationships	
BSBWOR402A	Promote team effectiveness	
BSBWOR501B	Manage personal work priorities and professional development	
BSBWOR502B	Ensure team effectiveness	
BSBWRK506A	Coordinate research and analysis	
BSBWRT401A	Write complex documents	
CHCPOL403C	Undertake research activities	
CPCCCBC4001A	Apply building codes and standards to the construction process for low-rise building projects	
CPCCCBC4004A	Identify and produce estimated costs for building and construction projects	
CPCCCBC4005A	Produce labour and material schedules for ordering	
CPCCCBC4014A	Prepare simple building sketches and drawings	
CPCCCBC4024A	Resolve business disputes	
CPCCCA3006B	Erect roof trusses	Supersedes CPCCCA3006A
CPCCCM1015A	Carry out measurements and calculations	Supersedes CPCCCM1005A
CPCCLDG3001A	Licence to perform dogging	
CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry	
CPCCSV5010A	Interact with clients in a regulated environment	
CPCCSV5011A	Apply building codes and standards to	

	residential buildings	
CPCCSV5012A	Assess timber-framed designs for one and two storey buildings	
CPCCSV5015A	Assess structural requirements for domestic scale buildings	
CPCSUS4001A	Implement and monitor environmentally sustainable work practices	
CPPSEC3007A	Maintain security of environment	
CUVDES405A	Research and apply techniques in spatial design	
HLTFA301C	Apply first aid	
HLTFA302C	Provide first aid in remote situation	
HLTFA311A	Apply first aid	Supersedes HLTFA301C
HLTFA403C	Manage first aid in the workplace	
HLTFA412A	Apply advanced first aid	Supersedes HLTFA402C
ICAICT308A	Use advanced features of computer applications	
ICTSUS7235A	Use ICT to improve sustainability outcomes	
LGACOM401A	Administer contracts	Release 2
LGACOM409A	Prepare tender documentation	Release 2
LGACOM502B	Devise and conduct community consultations	Release 2
LGAEHRR504C	Implement public environmental health education programs	Release 2
LGAPLEM404A	Prepare and present geographic information systems data	Release 2
LGAPLEM612B	Protect heritage and cultural asset	Release 2
LGAWORK212A	Perform field support duties in a roadwork environment	Release 2
LMFGG2008C	Glaze reglaze residential windows and doors	

MEM05004C	Perform routine oxyacetylene welding	
MEM05006C	Perform brazing and/or silver soldering	
MEM05049B	Perform routine gas tungsten arc welding	
MEM05050B	Perform routine gas metal arc welding	
MEM18011C	Shut down and isolate machines/equipment	Release 2
MSACMT630A	Optimise cost of product	
MSACMT631A	Undertake value analysis of product costs in terms of customer requirements	
MSACMT671A	Develop and manage sustainable environmental practices	
MSAPMOPS404A	Co-ordinate maintenance	
MSAPMSUP390A	Use structured problem solving tools	
MSS015002A	Develop strategies for more sustainable use of resources	
MSS015003A	Analyse product lifecycle for sustainability	
MSS015011A	Conduct a sustainability energy audit	
MSS402001A	Apply competitive systems and practices	
MSS402030A	Apply cost factors to work practices	
MSS402050A	Monitor process capability	
MSS402051A	Apply quality standards	
MSS402060A	Use planning software systems in operations	Supersedes MSACMT260A
MSS403001A	Implement competitive systems and practices	
MSS403010A	Facilitate change in an organisation implementing competitive systems and practices	
MSS403032A	Analyse manual handling processes	
MSS403051A	Mistake proof an operational process	

MSS404050A	Undertake process capability improvements (*Prerequisite: MSS404052A Apply statistics to operational processes)	Supersedes MSACMT450A
MSS404052A	Apply statistics to operational processes	
MSS404060A	Facilitate the use of planning software systems in a work area or team	Supersedes MSACMT460A
MSS404082A	Assist in implementing a proactive maintenance strategy	
MSS405001A	Develop competitive systems and practices for an organisation	
MSS405004A	Develop business plans in an organisation implementing competitive systems and practices	
MSS405062A	Develop a documentation control strategy for an organisation	
MSS405070A	Develop and manage sustainable energy practices	
MSS405075A	Facilitate the development of a new product	Supersedes MSACMT675A
PSPGOV521A	Collect statistical data	
PSPPOL603A	Manage policy implementation	Release 3
PSPREG603A	Manage and lead inspection and monitoring programs	Release 3
PUACOM012B	Liaise with media at a local level	
PUAEQU001B	Prepare, maintain and test response equipment	
PUAFIR203B	Respond to urban fire OR	
PUAFIR204B	Respond to wildfire (unit has PUAFIR215 Prevent injury as a prerequisite)	Release 2
PUAFIR205B	Respond to aviation incident (specialist)	
PUAFIR209B	Work safely around aircraft	Release 3
PUAFIR215	Prevent injury	Supersedes

		PUAFIR201B
PUAFIR303B	Suppress wildfire (unit has PUAFIR204B Respond to wildfire as a prerequisite)	Release 2
PUAFIR309B	Operate pumps	Release 2
PUAFIR406B	Develop prescribed burning plans (unit has PUAFIR303B Suppress wildfire as a prerequisite)	
PUAFIR407B	Conduct prescribed burning (unit has PUAFIR303B Suppress wildfire as a prerequisite)	
PUAFIR501B	Conduct fire investigation and analysis activities (unit has PUALAW001B Protect and preserve incident scene as a prerequisite)	Release 3
PUAFIR509B	Implement prevention strategies	Release 3
PUALAW001B	Protect and preserve incident scene	Release 2
PUALAW002B	Conduct initial investigation at incident scene	Release 2
PUAOHS002B	Maintain safety at an incident scene	Release 3
PUAOPE001B	Supervise response	
PUAOPE002B	Operate communications systems and equipment	
PUAOPE005B	Manage a multi-team response	
PUAOPE007B	Command agency personnel within a multi-agency emergency response (unit has PUAOPE001B Supervise response as a prerequisite)	Release 3
PUATEA001B	Work in a team	Release 2
PUATEA002B	Work autonomously	Release 3
RIIHAN308A	Load and unload plant	
RIIMPO315A	Conduct tractor operations	
RIIMPO317A	Conduct roller operations	

RIIMPO318B	Conduct civil construction skid steer loader operations	
RIIMPO319A	Conduct backhoe/loader operations	
RIIMPO320B	Conduct civil construction excavator operations	
RIIMPO321B	Conduct civil construction wheeled front end loader operations	
RIIMPO322A	Conduct civil construction tracked front end loader operations	
RIIMPO323A	Conduct civil construction dozer operations	
RIIMPO324A	Conduct civil construction grader operations	
RIIOHS205A	Control traffic with stop-slow bat	
RIIVEH304B	Conduct tip truck operations	
SIRRRPK010A	Recommend home and home improvement products and services	Release 2
SIRRRPK214	Recommend specialised products and services	
SIRXADM001A	Apply retail office procedures	Release 2
SIRXCCS201	Apply point-of-sale handling procedures	
SIRXCCS202	Interact with customers	
SIRXFIN002A	Perform retail finance duties	Release 2
SIRXFIN003A	Produce financial reports	Release 2
SIRXFIN004A	Manage financial resources	Release 2
SIRXFIN201	Balance and secure point-of-sale terminal	
SIRXICT001A	Operate retail technology	Release 2
SIRXICT303	Operate retail information technology systems	
SIRXINV001A	Perform stock control procedures	Release 2
SIRXINV002A	Maintain and order stock	Release 2
SIRXINV004A	Buy merchandise	

SIRXMER004A	Manage merchandise and store presentation	
SIRXMER201	Merchandise products	
SIRXMER202	Plan, create and maintain displays	
SIRXMER303	Coordinate merchandise presentation	
SIRXMER406	Monitor in-store visual merchandising display	
SIRXQUA001A	Develop innovative ideas at work	
SIRXRSK001A	Minimise theft	
SIRXRSK002A	Maintain store security	Release 2
SIRXRSK003A	Apply store security systems and procedures	Release 2
SIRXSLS002A	Advise on products and services	
SIRXSLS201	Sell products and services	
SIRXSLS303	Build relationships with customers	
SIRXSLS304	Coordinate sales performance	
SIRXSLS406	Manage sales and service delivery	
SIRXWHS302	Maintain store safety	
SITTPPD402	Develop interpretive activities	Supersedes SITTPPD005A
TAEASS401B	Plan assessment activities and processes	
TAEASS402B	Assess competence	
TAEASS403B	Participate in assessment validation	
TAEDEL301A	Provide work skill instruction	
TAEDEL401A	Plan, organise and deliver group-based learning	
TAEDEL402A	Plan, organise and facilitate learning in the workplace	
TAEDES401A	Design and develop learning programs	
TAEDES402A	Use training packages and accredited courses to	

	meet client needs	
TLIA2012A	Pick and process orders	
TLIA3018A	Organise despatch operations	
TLIC2002A	Drive light rigid vehicle	
TLIC3003A	Drive medium rigid vehicle	
TLIC3004A	Drive heavy rigid vehicle	
TLIC3005A	Drive heavy combination vehicle	
TLIC3063A	Operate vehicle carrying special loads	
TLIC4006A	Drive multi-combination vehicle	
TLID1001A	Shift materials safely using manual handling methods	
TLID2004A	Load and unload goods/cargo	
TLID2010A	Operate a forklift	
TLID2012A	Operate specialised load shifting equipment	
TLID2013A	Move materials mechanically using automated equipment	
TLID2047A	Prepare cargo for transfer with slings	
TLID3011A	Conduct specialised forklift operations	
TLID3014A	Load and unload vehicles carrying special loads	
TLID3033A	Operate a vehicle-mounted loading crane	
TLID3035A	Operate a boom type elevating work platform	
TLID3036A	Lift and move load using a mobile crane	
TLID3043A	Shift loads using gantry equipment	
TLID4032A	Plan and conduct specialised lift	
TLIE3002A	Estimate/calculate mass, area and quantify dimensions	
TLIE4006A	Collect, analyse and present workplace data	

	and information	
TLIF1002B	Conduct housekeeping activities	
TLIF2010A	Apply fatigue management strategies	
TLIF4007A	Implement and coordinate accident-emergency procedures	
TLIH2001A	Interpret road maps and navigate pre-determined routes	
TLILIC2001A	Licence to operate a forklift truck	
TLILIC2016B	Licence to drive a heavy rigid vehicle	Supersedes TLILIC2016A
TLILIC3017B	Licence to drive a heavy combination vehicle	Supersedes TLILIC3017A
TLILIC3018B	Licence to drive a multi-combination vehicle	Supersedes TLILIC3018A
TLIR4002A	Source goods/services and evaluate contractors	

Mapping of Qualifications to the Previous Training Package

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
FPI20111 Certificate II in Forest Growing and Management	FPI20111 Certificate II in Forest Growing and Management	<p>New unit added to Group B elective pool:</p> <ul style="list-style-type: none"> FPICOT3263 Maintain and contribute to energy efficiency <p>Updated equivalent imported unit in Group A elective pool:</p> <ul style="list-style-type: none"> PUAFIR215 Prevent injury <p>Imported units updated to current release:</p>	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		<ul style="list-style-type: none"> • AHCNSY203A • LGAWORK212A • PUAFIR204B • PUAFIR209B • PUALAW001B • PUATEA001B 	
FPI20211 Certificate II in Harvesting and Haulage	FPI20211 Certificate II in Harvesting and Haulage	<p>New unit added to Group B elective pool:</p> <ul style="list-style-type: none"> • FPICOT3263 Maintain and contribute to energy efficiency <p>Updated equivalent imported unit in Group A elective pool:</p> <ul style="list-style-type: none"> • PUAFIR215 Prevent injury <p>Imported units updated to current release:</p> <ul style="list-style-type: none"> • PUAFIR204B • PUALAW001B • PUATEA001B 	E
FPI30111 Certificate III in Forest Growing and Management	FPI30111 Certificate III in Forest Growing and Management	<p>New unit added to Group B elective pool:</p> <ul style="list-style-type: none"> • FPICOT3263 Maintain and contribute to energy efficiency <p>Updated non-equivalent imported unit in Group B elective pool:</p> <ul style="list-style-type: none"> • HLTF412A Apply advanced first aid (unit has HLTF311A Apply first aid as a prerequisite) <p>Imported units updated to current release:</p> <ul style="list-style-type: none"> • PUAFIR303B • PUAFIR309B 	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		<ul style="list-style-type: none"> • PUALAW002B • PUAOHS002B • PUATEA002B 	
FPI30211 Certificate III in Harvesting and Haulage	FPI30211 Certificate III in Harvesting and Haulage	<p>Packaging rules for special requirements for log truck driver descriptor updated.</p> <p>Three new units added to the elective pool:</p> <ul style="list-style-type: none"> • FPICOT3261 Transport forestry logs using trucks (replacing non-equivalent superseded elective FPICOT3226B Shift forestry logs using trucks) • FPICOT3262 Transport forestry produce using trucks • FPICOT3263 Maintain and contribute to energy efficiency <p>Elective units updated to current equivalent version:</p> <ul style="list-style-type: none"> • TLILIC2016B Licence to drive a heavy rigid vehicle • TLILIC3017B Licence to drive a heavy combination vehicle • TLILIC3018B Licence to drive a multi combination vehicle <p>Updated non-equivalent imported unit in Group B elective pool:</p> <ul style="list-style-type: none"> • HLTF412A Apply advanced first aid (unit has HLTF311A Apply first aid as a prerequisite) <p>Imported units updated to</p>	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		current release: <ul style="list-style-type: none"> • PUAFIR303B • PUAFIR309B • PUAOHS002B • PUATEA002B 	
Mapping of qualifications to the previous Training Package			
FPI11 V2	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
FPI10111 Certificate I in Forest and Forest Products	FPI10111 Certificate I in Forest and Forest Products	Imported unit updated to current release: <ul style="list-style-type: none"> • PUATEA001B 	E
FPI20113 Certificate II in Forest Growing and Management	FPI20111 Certificate II in Forest Growing and Management	Core non-equivalent imported unit updated to current: <ul style="list-style-type: none"> • HLTF311A Apply first aid New unit added to Group B elective pool: <ul style="list-style-type: none"> • FPICOT3263 Maintain and contribute to energy efficiency Updated equivalent imported unit in Group A elective pool: <ul style="list-style-type: none"> • PUAFIR215 Prevent injury Imported units updated to current release: <ul style="list-style-type: none"> • AHCNSY203A • LGAWORK212A • PUAFIR204B • PUAFIR209B • PUALAW001B • PUATEA001B 	N
FPI20213 Certificate II in Harvesting and Haulage	FPI20211 Certificate II in Harvesting and Haulage	Core non-equivalent imported unit updated to current: <ul style="list-style-type: none"> • HLTF311A Apply first aid New unit added to Group B elective pool: <ul style="list-style-type: none"> • FPICOT3263 Maintain and contribute 	N

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		<p>to energy efficiency</p> <p>Updated equivalent imported unit in Group A elective pool:</p> <ul style="list-style-type: none"> PUAFIR215 Prevent injury <p>Imported units updated to current release:</p> <ul style="list-style-type: none"> PUAFIR204B PUALAW001B PUATEA001B 	
FPI20311 Certificate II in Sawmilling and Processing	FPI20311 Certificate II in Sawmilling and Processing	<p>New unit added to Group A elective pool:</p> <ul style="list-style-type: none"> FPICOT2241 Apply wood and timber product knowledge <p>Two new units added to Group B elective pool:</p> <ul style="list-style-type: none"> FPICOT3263 Maintain and contribute to energy efficiency FPICOT3264 Build and maintain timber stacks <p>Updated non-equivalent imported unit in Group B elective pool:</p> <ul style="list-style-type: none"> HLTFA311A Apply first aid <p>Imported unit updated to current release:</p> <ul style="list-style-type: none"> MEM18011C 	E
FPI20411 Certificate II in Wood Panel Products	FPI20411 Certificate II in Wood Panel Products	<p>Three new units added to Group B elective pool:</p> <ul style="list-style-type: none"> FPICOT2241 Apply wood and timber product knowledge FPICOT3263 Maintain and contribute to energy efficiency FPICOT3264 Build and maintain timber stacks <p>Updated non-equivalent imported unit in Group B elective pool:</p> <ul style="list-style-type: none"> HLTFA311A Apply first aid 	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		Imported unit updated to current release: <ul style="list-style-type: none"> MEM18011C 	
FPI20511 Certificate II in Timber Manufactured Products	FPI20511 Certificate II in Timber Manufactured Products	New unit added to Group A elective pool: <ul style="list-style-type: none"> FPICOT2241 Apply wood and timber product knowledge New units added to Group B elective pool: <ul style="list-style-type: none"> FPICOT3263 Maintain and contribute to energy efficiency FPICOT3264 Build and maintain timber stacks Updated non-equivalent imported unit in Group B elective pool: <ul style="list-style-type: none"> HLTFA311A Apply first aid 	E
FPI20611 Certificate II in Timber Merchandising	FPI20611 Certificate II in Timber Merchandising	New units added to Group A elective pool: <ul style="list-style-type: none"> FPICOT2241 Apply wood and timber product knowledge FPICOT3264 Build and maintain timber stacks New unit added to Group B elective pool: <ul style="list-style-type: none"> FPICOT3263 Maintain and contribute to energy efficiency Updated non-equivalent imported unit in Group B elective pool: <ul style="list-style-type: none"> HLTFA311A Apply first aid Imported units updated to current release: <ul style="list-style-type: none"> SIRXADM001A SIRXFIN002A SIRXICT001A SIRXINV001A 	E
FPI20711 Certificate II in Timber Truss and Frame Design and Manufacture	FPI20711 Certificate II in Timber Truss and Frame Design and Manufacture	New units added to Group A elective pool: <ul style="list-style-type: none"> FPICOT3263 Maintain and contribute to energy efficiency FPICOT3264 Build and maintain 	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		<p>timber stacks</p> <p>Updated non-equivalent imported unit in Group A elective pool:</p> <ul style="list-style-type: none"> HLTFA311A Apply first aid 	
FPI30113 Certificate III in Forest Growing and Management	FPI30111 Certificate III in Forest Growing and Management	<p>Core non-equivalent imported unit updated to current:</p> <ul style="list-style-type: none"> HLTFA311A Apply first aid <p>New unit added to Group B elective pool:</p> <ul style="list-style-type: none"> FPICOT3263 Maintain and contribute to energy efficiency <p>Updated non-equivalent imported unit in Group B elective pool:</p> <ul style="list-style-type: none"> HLTFA412A Apply advanced first aid (unit has HLTFA311A Apply first aid as a prerequisite) <p>Imported units updated to current release:</p> <ul style="list-style-type: none"> PUAFIR303B PUAFIR309B PUALAW002B PUAOHS002B PUATEA002B 	N
FPI30213 Certificate III in Harvesting and Haulage	FPI30211 Certificate III in Harvesting and Haulage	<p>Core non-equivalent imported unit updated to current:</p> <ul style="list-style-type: none"> HLTFA311A Apply first aid <p>Three new units added to the elective pool:</p> <ul style="list-style-type: none"> FPICOT3261 Transport forestry logs using trucks (replacing non-equivalent superseded elective FPICOT3226B Shift forestry logs using trucks) FPICOT3262 Transport forestry produce using trucks FPICOT3263 Maintain and contribute to energy efficiency <p>Elective units updated to current equivalent</p>	N

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		<p>version:</p> <ul style="list-style-type: none"> • TLILIC2016B Licence to drive a heavy rigid vehicle • TLILIC3017B Licence to drive a heavy combination vehicle • TLILIC3018B Licence to drive a multi combination vehicle <p>Updated non-equivalent imported unit in Group B elective pool:</p> <ul style="list-style-type: none"> • HLTF4412A Apply advanced first aid (unit has HLTF4311A Apply first aid as a prerequisite) <p>Imported units updated to current release:</p> <ul style="list-style-type: none"> • PUAFIR303B • PUAFIR309B • PUAOHS002B • PUATEA002B 	
FPI30311 Certificate III in Sawmilling and Processing	FPI30311 Certificate III in Sawmilling and Processing	<p>New units added to Group A elective pool:</p> <ul style="list-style-type: none"> • FPICOT2241 Apply wood and timber product knowledge • FPICOT3264 Build and maintain timber stacks <p>New unit added to Group B elective pool:</p> <ul style="list-style-type: none"> • FPICOT3263 Maintain and contribute to energy efficiency <p>Updated non-equivalent imported units in Group B elective pool:</p> <ul style="list-style-type: none"> • MSS404060A Facilitate the use of planning software systems in a work area or team (prerequisite required of previous version removed) • HLTF4412A Apply advanced first aid (unit has HLTF4311A Apply first aid as a prerequisite) <p>Imported unit updated to current release:</p>	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		<ul style="list-style-type: none"> MEM18011C 	
FPI30411 Certificate III in Wood Panel Products	FPI30411 Certificate III in Wood Panel Products	<p>New units added to Group A elective pool:</p> <ul style="list-style-type: none"> FPICOT2241 Apply wood and timber product knowledge FPICOT3264 Build and maintain timber stacks <p>New unit added to Group B elective pool:</p> <ul style="list-style-type: none"> FPICOT3263 Maintain and contribute to energy efficiency <p>Updated non-equivalent imported units in Group B elective pool:</p> <ul style="list-style-type: none"> HLTFA311A Apply first aid HLTFA412A Apply advanced first aid (unit has HLTFA311A Apply first aid as a prerequisite) MSS402060A Use planning software systems in operations MSS404060A Facilitate the use of planning software systems in a work area or team (prerequisite required of previous version removed) <p>Imported unit updated to current release:</p> <ul style="list-style-type: none"> MEM18011C 	E
FPI30511 Certificate III in Timber Manufactured Products	FPI30511 Certificate III in Timber Manufactured Products	<p>New units added to Group B elective pool:</p> <ul style="list-style-type: none"> FPICOT2241 Apply wood and timber product knowledge FPICOT3263 Maintain and contribute to energy efficiency FPICOT3264 Build and maintain timber stacks <p>Updated non-equivalent imported units in Group B elective pool:</p> <ul style="list-style-type: none"> HLTFA311A Apply first aid HLTFA412A Apply advanced first aid 	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		(unit has HLTF311A Apply first aid as a prerequisite) <ul style="list-style-type: none"> • MSS402060A Use planning software systems in operations • MSS404060A Facilitate the use of planning software systems in a work area or team (prerequisite required of previous version removed) 	
FPI30611 Certificate III in Timber Merchandising	FPI30611 Certificate III in Timber Merchandising	New units added to Group A elective pool: <ul style="list-style-type: none"> • FPICOT2241 Apply wood and timber product knowledge • FPICOT3264 Build and maintain timber stacks New unit added to Group B elective pool: <ul style="list-style-type: none"> • FPICOT3263 Maintain and contribute to energy efficiency Updated non-equivalent imported unit in Group B elective pool: <ul style="list-style-type: none"> • HLTF412A Apply advanced first aid (unit has HLTF311A Apply first aid as a prerequisite) Imported unit updated to current release: <ul style="list-style-type: none"> • SIRRRPK010A • SIRXFIN003A • SIRXINV002A • SIRXRSK002A • SIRXRSK003A 	E
FPI30711 Certificate III in Sawdoctoring	FPI30711 Certificate III in Sawdoctoring	New unit added to elective pool: <ul style="list-style-type: none"> • FPICOT3263 Maintain and contribute to energy efficiency 	E
FPI30811 Certificate III in Woodmachining	FPI30811 Certificate III in Woodmachining	New unit added to Group B elective pool: <ul style="list-style-type: none"> • FPICOT3263 Maintain and contribute to energy efficiency 	E
FPI30911 Certificate III in Timber Truss	FPI30911 Certificate III in Timber Truss	New units added to Group C elective pool:	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
and Frame Design and Manufacture	and Frame Design and Manufacture	<ul style="list-style-type: none"> • FPICOT3263 Maintain and contribute to energy efficiency • FPICOT3264 Build and maintain timber stacks <p>Updated non-equivalent imported units in Group C elective pool:</p> <ul style="list-style-type: none"> • CPCCCM1015A Carry out measurements and calculations • HLTF311A Apply first aid • HLTF412A Apply advanced first aid (unit has HLTF311A Apply first aid as a prerequisite) 	
FPI40111 Certificate IV in Forest Operations	FPI40111 Certificate IV in Forest Operations	<p>Native unit updated to current equivalent version:</p> <ul style="list-style-type: none"> • FPIFGM4203C Design plantations <p>Two imported units added to Group B elective pool:</p> <ul style="list-style-type: none"> • MSS015011A Conduct a sustainability energy audit • MSS405070A Develop and manage sustainable energy practices <p>Updated non-equivalent imported units in Group B elective pool:</p> <ul style="list-style-type: none"> • BSBPMG416A Apply project procurement procedures • HLTF311A Apply first aid • HLTF412A Apply advanced first aid (unit has HLTF311A Apply first aid as a prerequisite) <p>Updated equivalent imported units in Group B elective pool:</p> <ul style="list-style-type: none"> • PUALAW002B • SITTPPD402 Develop interpretive activities 	E
FPI40211 Certificate IV in Timber	FPI40211 Certificate IV in Timber	Two imported units added to Group B elective pool:	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
Processing	Processing	<ul style="list-style-type: none"> MSS015011A Conduct a sustainability energy audit MSS405070A Develop and manage sustainable energy practices <p>Updated non-equivalent imported unit in Group B elective pool:</p> <ul style="list-style-type: none"> BSBPMG416A Apply project procurement procedures <p>Co-requisite unit to HLTF403C updated to current non-equivalent version HLTF412A</p>	
FPI40311 Certificate IV in Timber Truss and Frame Manufacture	FPI40311 Certificate IV in Timber Truss and Frame Manufacture	<p>Two imported units added to elective pool:</p> <ul style="list-style-type: none"> MSS015011A Conduct a sustainability energy audit MSS405070A Develop and manage sustainable energy practices <p>Updated non-equivalent imported units in elective pool:</p> <ul style="list-style-type: none"> BSBPMG415A Apply project risk-management techniques HLTF412A Apply advanced first aid (unit has HLTF311A Apply first aid as a prerequisite) MSS404060A Facilitate the use of planning software systems in a work area or team <p>Updated equivalent imported units in elective pool:</p> <ul style="list-style-type: none"> BSBPMG522A Undertake project work CPCCA3006B Erect roof trusses MSS404050A Undertake process capability improvements (*Prerequisite MSS404052A Apply statistics to operational processes) 	E
FPI40411 Certificate IV in Timber Truss	FPI40411 Certificate IV in Timber Truss	<p>Two imported units added to Group B elective pool:</p>	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
and Frame Design	and Frame Design	<ul style="list-style-type: none"> MSS015011A Conduct a sustainability energy audit MSS405070A Develop and manage sustainable energy practices <p>Updated non-equivalent imported units in Group C elective pool:</p> <ul style="list-style-type: none"> BSBPMG415A Apply project risk-management techniques HLTFA412A Apply advanced first aid (unit has HLTFA311A Apply first aid as a prerequisite) MSS404060A Facilitate the use of planning software systems in a work area or team <p>Updated equivalent imported units in Group C elective pool:</p> <ul style="list-style-type: none"> BSBPMG522A Undertake project work CPCCCA3006B Erect roof trusses MSS404050A Undertake process capability improvements (*Prerequisite <i>MSS404052A Apply statistics to operational processes</i>) 	
FPI50111 Diploma of Forest and Forest Products	FPI50111 Diploma of Forest and Forest Products	<p>Core imported unit updated with equivalent version:</p> <ul style="list-style-type: none"> BSBOHS504B Apply principles of OHS risk management replaced with BSBWHS503A Contribute to the systematic management of WHS risk <p>Two imported units added to Group B elective pool:</p> <ul style="list-style-type: none"> MSS015011A Conduct a sustainability energy audit MSS405070A Develop and manage sustainable energy practices <p>Native and imported elective units updated to current equivalent version:</p> <ul style="list-style-type: none"> BSBPMG522A replaces 	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		BSBPMG510A <ul style="list-style-type: none"> • FPICOT5206B replaces FPICOT5206A • FPICOT5208B replaces FPICOT5208A • FPICOT5209B replaces FPICOT5209A • FPIFGM5219 replaces FPIFGM5218A Imported units updated to current release: <ul style="list-style-type: none"> • LGACOM401A • LGACOM409A • LGACOM502B • LGAEHRR504C • LGAPLEM404A • LGAPLEM612B • PUAFIR501B • PUAFIR509B • PUALAW001B • PUAOPE007B 	
FPI50311 Diploma of Timber Truss and Frame Manufacture	FPI50311 Diploma of Timber Truss and Frame Manufacture	Core imported unit updated with equivalent version: <ul style="list-style-type: none"> • BSBOHS504B Apply principles of OHS risk management replaced with BSBWHS503A Contribute to the systematic management of WHS risk Two imported units added to Group B elective pool: <ul style="list-style-type: none"> • MSS015011A Conduct a sustainability energy audit • MSS405070A Develop and manage sustainable energy practices One imported unit of competency updated: <ul style="list-style-type: none"> • MSS405075A replaces MSACMT675A - Equivalent 	E
FPI50411 Diploma of Timber Truss and Frame Design	FPI50411 Diploma of Timber Truss and Frame Design	Core imported unit updated with equivalent version: <ul style="list-style-type: none"> • BSBOHS504B Apply principles of OHS risk management replaced with BSBWHS503A Contribute to the 	E

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		<p>systematic management of WHS risk</p> <p>Two imported units added to Group B elective pool:</p> <ul style="list-style-type: none"> • MSS015011A Conduct a sustainability energy audit • MSS405070A Develop and manage sustainable energy practices <p>One imported unit of competency updated:</p> <ul style="list-style-type: none"> • MSS405075A replaces MSACMT675A - Equivalent 	
FPI60113 Advanced Diploma of Forest Industry Sustainability	FPI60111 Advanced Diploma of Forest Industry Sustainability	<p>The total number of units required has been reduced from 14 to 10, as a result of:</p> <ul style="list-style-type: none"> • core units required reduced from 3 to 2 • elective units required reduced from 11 to 8 and packaging of electives changed to increase qualification's flexibility and provide option to focus on leadership through the choice of elective units <p>Further changes to qualification as follows:</p> <ul style="list-style-type: none"> • naming of elective unit fields and allocation of units to fields in qualification changed • updates to native and imported elective units of competency, while maintaining equivalence: • FPICOT5206B • FPICOT5208B • FPICOT5209B • FPICOT6202B • FPIFGM5219 replaces FPIFGM5218A • FPIFGM6203 replaces FPIFGM6202A • FPIFGM6201B • addition of imported elective units into leadership field of elective pool: • BSBMGT616A Develop and implement strategic plans 	N

Mapping of qualifications to the previous Training Package			
FPI11 V2.1	Relationship to FPI11 V1.1	Comment in relation to the previous iteration of the Training Package	E/N
		<ul style="list-style-type: none"> • BSBPMG414A Apply project information management and communications techniques • imported units removed from qualification: • PSPGOV521A and BSBPMG510A replaced by BSBPMG414A • PSPGOV602B replaced by BSBREL701A • PSPMNGT604B and PSPMNGT703A replaced by BSBMGT608C and BSBINN601B • units removed from qualification: • BSBADM502B • BSBWOR501B • SIRXFIN005A • SIRXMER004A • SIRXMGT005A <p>Imported units updated to current release:</p> <ul style="list-style-type: none"> • PSPPOL603A • PSPREG603A • SIRXFIN004A 	

Mapping of Units of Competency to the Previous Training Pack

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
Core	Core	
FPICOR2201B Work effectively in the forest and forest products industry	FPICOR2201B Work effectively in the forest and forest products industry	Equivalent
FPICOR2202B Communicate and interact effectively in the workplace	FPICOR2202B Communicate and interact effectively in the workplace	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPICOR2203B Follow environmental care procedures	FPICOR2203B Follow environmental care procedures	Equivalent
FPICOR2204B Follow fire prevention procedures	FPICOR2204B Follow fire prevention procedures	Equivalent
FPICOR2205B Follow OHS policies and procedures	FPICOR2205B Follow OHS policies and procedures	Equivalent
FPICOR2207B Maintain quality and product care	FPICOR2207B Maintain quality and product care	Equivalent
FPICOR3201B Implement SHE policies and procedures	FPICOR3201B Implement SHE policies and procedures	Equivalent
FPICOR3202B Conduct quality and product care procedures	FPICOR3202B Conduct quality and product care procedures	Equivalent
FPICOR3203B Evaluate fire potential and prevention	FPICOR3203B Evaluate fire potential and prevention	Equivalent
FPICOR3204B Visually assess materials	FPICOR3204B Visually assess materials	Equivalent
FPICOR4201B Monitor SHE policies and procedures	FPICOR4201B Monitor SHE policies and procedures	Equivalent
FPICOR4202B Monitor and review forestry operations	FPICOR4202B Monitor and review forestry operations	Equivalent
FPICOR4203B Monitor quality and product care procedures	FPICOR4203B Monitor quality and product care procedures	Equivalent
FPICOR6201A Manage sustainability in the workplace	FPICOR6201A Manage sustainability in the workplace	Equivalent
FPICOR6202A Implement practices to maximise value from wood residues	FPICOR6202A Implement practices to maximise value from wood residues	Equivalent
Common Technical	Common Technical	
FPICOT2201B Stack and bind material	FPICOT2201B Stack and bind material	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPICOT2202B Rack material	FPICOT2202B Rack material	Equivalent
FPICOT2203B Finish products	FPICOT2203B Finish products	Equivalent
FPICOT2205B Tail out materials	FPICOT2205B Tail out materials	Equivalent
FPICOT2207B Dress boards and timber	FPICOT2207B Dress boards and timber	Equivalent
FPICOT2208B Resaw boards and timber	FPICOT2208B Resaw boards and timber	Equivalent
FPICOT2209B Produce finger jointed timber	FPICOT2209B Produce finger jointed timber	Equivalent
FPICOT2210B Tally material	FPICOT2210B Tally material	Equivalent
FPICOT2211B Produce pointed timber products	FPICOT2211B Produce pointed timber products	Equivalent
FPICOT2212B Grade hardwood sawn and milled products	FPICOT2212B Grade hardwood sawn and milled products	Equivalent
FPICOT2213B Grade softwood sawn and milled products	FPICOT2213B Grade softwood sawn and milled products	Equivalent
FPICOT2214B Grade cypress sawn and milled products	FPICOT2214B Grade cypress sawn and milled products	Equivalent
FPICOT2215B Visually stress grade hardwood	FPICOT2215B Visually stress grade hardwood	Equivalent
FPICOT2216B Visually stress grade softwood	FPICOT2216B Visually stress grade softwood	Equivalent
FPICOT2217B Visually stress grade cypress	FPICOT2217B Visually stress grade cypress	Equivalent
FPICOT2218B Cross cut materials with a fixed saw	FPICOT2218B Cross cut materials with a fixed saw	Equivalent
FPICOT2219B Use hand-held	FPICOT2219B Use hand-held	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
tools	tools	
FPICOT2220B Select trees for tending operations	FPICOT2220B Select trees for tending operations	Equivalent
FPICOT2222B Produce laminated beams	FPICOT2222B Produce laminated beams	Equivalent
FPICOT2223B Segregate and sort logs	FPICOT2223B Segregate and sort logs	Equivalent
FPICOT2224B Band edges of panels	FPICOT2224B Band edges of panels	Equivalent
FPICOT2225B Chip or flake wood	FPICOT2225B Chip or flake wood	Equivalent
FPICOT2226B Debark logs mechanically	FPICOT2226B Debark logs mechanically	Equivalent
FPICOT2227B Process orders and despatch products	FPICOT2227B Process orders and despatch products	Equivalent
FPICOT2228B Store materials	FPICOT2228B Store materials	Equivalent
FPICOT2229B Dock material to length	FPICOT2229B Dock material to length	Equivalent
FPICOT2230B Assemble products	FPICOT2230B Assemble products	Equivalent
FPICOT2231B Pack products	FPICOT2231B Pack products	Equivalent
FPICOT2232B Cut material to shape using a saw	FPICOT2232B Cut material to shape using a saw	Equivalent
FPICOT2233B Navigate in forest areas	FPICOT2233B Navigate in forest areas	Equivalent
FPICOT2235A Assess timber for manufacturing potential	FPICOT2235A Assess timber for manufacturing potential	Equivalent
FPICOT2236 Fall trees manually (basic)	FPICOT2236 Fall trees manually (basic)	Equivalent
FPICOT2237A Maintain	FPICOT2237A Maintain	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
chainsaws	chainsaws	
FPICOT2238A Cut materials with a hand-held chain saw	FPICOT2238A Cut materials with a hand-held chain saw	Equivalent
FPICOT2239A Trim and cut felled trees	FPICOT2239A Trim and cut felled trees	Equivalent
FPICOT2240 Cut material with a pole saw	FPICOT2240 Cut material with a pole saw	Equivalent
FPICOT2241 Apply wood and timber product knowledge	No previous unit	New unit, no equivalent unit
FPICOT3201B Hand sharpen knives and blades	FPICOT3201B Hand sharpen knives and blades	Equivalent
FPICOT3202B Navigate in remote or trackless areas	FPICOT3202B Navigate in remote or trackless areas	Equivalent
FPICOT3203B Weigh loads	FPICOT3203B Weigh loads	Equivalent
FPICOT3204B Prepare and interpret sketches and drawings	FPICOT3204B Prepare and interpret sketches and drawings	Equivalent
FPICOT3205B Dress boards using multi-headed machines	FPICOT3205B Dress boards using multi-headed machines	Equivalent
FPICOT3206B Cut material using high speed optimiser	FPICOT3206B Cut material using high speed optimiser	Equivalent
FPICOT3207B Set up, operate and maintain finger jointing operations	FPICOT3207B Set up, operate and maintain finger jointing operations	Equivalent
FPICOT3208B Test strength of joints	FPICOT3208B Test strength of joints	Equivalent
FPICOT3209B Set up, operate and maintain end matching operations	FPICOT3209B Set up, operate and maintain end matching operations	Equivalent
FPICOT3210B Sharpen cutting tools	FPICOT3210B Sharpen cutting tools	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPICOT3211B Maintain sawdoctoring tools	FPICOT3211B Maintain sawdoctoring tools	Equivalent
FPICOT3212B Replace saws, blades and guides	FPICOT3212B Replace saws, blades and guides	Equivalent
FPICOT3213B Manufacture cutting tools	FPICOT3213B Manufacture cutting tools	Equivalent
FPICOT3214B Take off material quantities	FPICOT3214B Take off material quantities	Equivalent
FPICOT3215B Swage and shape saw blades	FPICOT3215B Swage and shape saw blades	Equivalent
FPICOT3216B Assess and maintain saw performance	FPICOT3216B Assess and maintain saw performance	Equivalent
FPICOT3217B Assess and maintain cutter performance	FPICOT3217B Assess and maintain cutter performance	Equivalent
FPICOT3218B Quote and interpret from manufactured timber product plans	FPICOT3218B Quote and interpret from manufactured timber product plans	Equivalent
FPICOT3219B Produce standard truss or frame plans and details using computers	FPICOT3219B Produce standard truss or frame plans and details using computers	Equivalent
FPICOT3220B Quote and interpret from computerised timber manufactured product plans	FPICOT3220B Quote and interpret from computerised timber manufactured product plans	Equivalent
FPICOT3221B Rehabilitate tracks, quarries and landings	FPICOT3221B Rehabilitate tracks, quarries and landings	Equivalent
FPICOT3222B Present forestry information and interpretations programs	FPICOT3222B Present forestry information and interpretations programs	Equivalent
FPICOT3223B Grade and mark logs	FPICOT3223B Grade and mark logs	Equivalent
FPICOT3224B Plan and monitor equipment	FPICOT3224B Plan and monitor equipment	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
maintenance	maintenance	
FPICOT3225B Mechanically stress grade timber	FPICOT3225B Mechanically stress grade timber	Equivalent
	FPICOT3226B Shift forestry logs using trucks	Deleted and replaced by FPICOT3261, No Equivalent
FPICOT3227B Receive and measure logs	FPICOT3227B Receive and measure logs	Equivalent
FPICOT3228B Plane/sand panels	FPICOT3228B Plane/sand panels	Equivalent
FPICOT3229B Mechanically stress grade panels	FPICOT3229B Mechanically stress grade panels	Equivalent
FPICOT3230B Operate automated stacking equipment	FPICOT3230B Operate automated stacking equipment	Equivalent
FPICOT3231B Operate steam boiler	FPICOT3231B Operate steam boiler	Equivalent
FPICOT3232B Operate heat plant	FPICOT3232B Operate heat plant	Equivalent
FPICOT3233B Sharpen and align blades and knives	FPICOT3233B Sharpen and align blades and knives	Equivalent
FPICOT3234B Cut material using CNC sizing machines	FPICOT3234B Cut material using CNC sizing machines	Equivalent
FPICOT3235B Machine material using CNC machining and processing centres	FPICOT3235B Machine material using CNC machining and processing centres	Equivalent
FPICOT3236B Coordinate stock control procedures	FPICOT3236B Coordinate stock control procedures	Equivalent
FPICOT3237B Produce templates	FPICOT3237B Produce templates	Equivalent
FPICOT3238B Operate a pole saw	FPICOT3238B Operate a pole saw	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPICOT3239B Create drawings using computer aided design systems	FPICOT3239B Create drawings using computer aided design systems	Equivalent
FPICOT3240B Grade heavy structural/engineered products	FPICOT3240B Grade heavy structural/engineered products	Equivalent
FPICOT3241B Assemble timber wall frames	FPICOT3241B Assemble timber wall frames	Equivalent
FPICOT3242B Lay up timber roof trusses	FPICOT3242B Lay up timber roof trusses	Equivalent
FPICOT3243B Operate a truss press	FPICOT3243B Operate a truss press	Equivalent
FPICOT3244B Cut material to profile	FPICOT3244B Cut material to profile	Equivalent
FPICOT3245B Grade, sort and mark material	FPICOT3245B Grade, sort and mark material	Equivalent
FPICOT3246B Test heavy structural/engineered products	FPICOT3246B Test heavy structural/engineered products	Equivalent
FPICOT3247B Select timber for forestry operations	FPICOT3247B Select timber for forestry operations	Equivalent
FPICOT3248A Dry timber in solar assisted kilns	FPICOT3248A Dry timber in solar assisted kilns	Equivalent
FPICOT3249A Select timber preservation techniques	FPICOT3249A Select timber preservation techniques	Equivalent
FPICOT3250A Prepare timber to meet import/export compliance requirements	FPICOT3250A Prepare timber to meet import/export compliance requirements	Equivalent
FPICOT3251A Promote the carbon benefits of wood products	FPICOT3251A Promote the carbon benefits of wood products	Equivalent
FPICOT3252A Use environmental care procedures to undertake fire salvage operations	FPICOT3252A Use environmental care procedures to undertake fire salvage operations	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPICOT3253A Convert timber residue into products for further use	FPICOT3253A Convert timber residue into products for further use	Equivalent
FPICOT3254A Implement environmentally sustainable work practices in the work area/work site	FPICOT3254A Implement environmentally sustainable work practices in the work area/work site	Equivalent
FPICOT3255 Apply silvicultural principles	FPICOT3255 Apply silvicultural principles	Equivalent
FPICOT3256 Apply biodiversity protection principles	FPICOT3256 Apply biodiversity protection principles	Equivalent
FPICOT3257 Follow cultural heritage requirements	FPICOT3257 Follow cultural heritage requirements	Equivalent
FPICOT3258 Comply with soil and water protection	FPICOT3258 Comply with soil and water protection	Equivalent
FPICOT3259 Operate a four-wheel drive on unsealed roads	FPICOT3259 Operate a four-wheel drive on unsealed roads	Equivalent
FPICOT3260 Recover four-wheel drive vehicles	FPICOT3260 Recover four-wheel drive vehicles	Equivalent
FPICOT3261 Transport forestry logs using trucks	FPICOT3226B Shift forestry logs using trucks	New unit, replaces FPICOT3226B. Not Equivalent
FPICOT3262 Transport forestry produce using trucks	No previous unit	New unit, no equivalent unit
FPICOT3263 Maintain and contribute to energy efficiency	No previous unit	New unit, no equivalent unit
FPICOT3264 Build and maintain timber stacks	No previous unit	New unit, no equivalent unit
FPICOT4201B Produce complex truss and frame plans and details using computers	FPICOT4201B Produce complex truss and frame plans and details using computers	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPICOT4202B Design timber structures	FPICOT4202B Design timber structures	Equivalent
FPICOT4203B Plan and coordinate product assembly	FPICOT4203B Plan and coordinate product assembly	Equivalent
FPICOT4204B Schedule and coordinate load shifting	FPICOT4204B Schedule and coordinate load shifting	Equivalent
FPICOT4205B Coordinate log debarking operations	FPICOT4205B Coordinate log debarking operations	Equivalent
FPICOT4206B Plan and coordinate boiler operations	FPICOT4206B Plan and coordinate boiler operations	Equivalent
FPICOT4207B Plan and coordinate heat plant operations	FPICOT4207B Plan and coordinate heat plant operations	Equivalent
FPICOT5201B Implement sustainable forestry practices	FPICOT5201B Implement sustainable forestry practices	Equivalent
FPICOT5202B Manage forestry information and interpretations programs	FPICOT5202B Manage forestry information and interpretations programs	Equivalent
FPICOT5203B Manage installation and commissioning of equipment	FPICOT5203B Manage installation and commissioning of equipment	Equivalent
FPICOT5204B Organise enterprise maintenance programs	FPICOT5204B Organise enterprise maintenance programs	Equivalent
FPICOT5205A Develop biohazard contingency plans	FPICOT5205A Develop biohazard contingency plans	Equivalent
FPICOT5206B Implement forestry chain of custody certification system	FPICOT5206A Implement Forestry Chain of Custody certification system	Explicit reference to Illegal Logging Prohibition Act 2012 included in required knowledge item relating to legislation Application section modified to include reference to native and plantation forest

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
		environments Equivalent
FPICOT5207A Implement sustainability in the workplace	FPICOT5207A Implement sustainability in the workplace	Equivalent
FPICOT5208B Build and maintain community relationships	FPICOT5208A Build and maintain community relationships	Application section modified to include reference to native and plantation forest environments Equivalent
FPICOT5209B Manage tree harvesting to minimise environmental impact	FPICOT5209A Manage tree harvesting to minimise environmental impact	Application section modified to include reference to native and plantation forest environments Equivalent
FPICOT6201B Manage community engagement	FPICOT6201A Manage community engagement	Application section modified to include reference to native and plantation forest environments Equivalent
FPICOT6202B Develop and manage a forestry chain of custody certification process for the workplace	FPICOT6202A Develop and manage a Forestry Chain of Custody certification process for the workplace	Explicit reference to Illegal Logging Prohibition Act 2012 included in required knowledge item relating to legislation Equivalent
FPICOT6203A Develop engineered timber products to meet energy efficient building	FPICOT6203A Develop engineered timber products to meet energy efficient building	Equivalent
FPICOT6204A Use carbon accounting to estimate emissions in the workplace	FPICOT6204A Use carbon accounting to estimate emissions in the workplace	Equivalent
FPICOT6205A Prepare an enterprise carbon management report	FPICOT6205A Prepare an enterprise carbon management report	Equivalent
FPICOT6207A Develop forest management systems and	FPICOT6207A Develop forest management systems and	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
processes	processes	
Forest Growing and Management	Forest Growing and Management	
FPIFGM2201B Collect seed	FPIFGM2201B Collect seed	Equivalent
FPIFGM2202B Prepare seedbed	FPIFGM2202B Prepare seedbed	Equivalent
FPIFGM2203B Plant trees by hand	FPIFGM2203B Plant trees by hand	Equivalent
FPIFGM2204B Plant trees mechanically	FPIFGM2204B Plant trees mechanically	Equivalent
FPIFGM2205B Prune trees	FPIFGM2205B Prune trees	Equivalent
FPIFGM2206B Collect data or samples for assessment	FPIFGM2206B Collect data or samples for assessment	Equivalent
FPIFGM2207B Undertake brushcutting operations	FPIFGM2207B Undertake brushcutting operations	Equivalent
FPIFGM2209B Cut, sort and set cuttings	FPIFGM2209B Cut, sort and set cuttings	Equivalent
FPIFGM2210B Implement animal pest control procedures	FPIFGM2210B Implement animal pest control procedures	Equivalent
FPIFGM2211B Detect fires	FPIFGM2211B Detect fires	Equivalent
FPIFGM2212B Graft cuttings	FPIFGM2212B Graft cuttings	Equivalent
FPIFGM2213B Process seed	FPIFGM2213B Process seed	Equivalent
FPIFGM2214B Maintain visitor sites	FPIFGM2214B Maintain visitor sites	Equivalent
FPIFGM2215B Measure trees	FPIFGM2215B Measure trees	Equivalent
FPIFGM3201B Manage seed collection	FPIFGM3201B Manage seed collection	Equivalent
FPIFGM3202B Extract seed	FPIFGM3202B Extract seed	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPIFGM3203B Conduct an instrument survey	FPIFGM3203B Conduct an instrument survey	Equivalent
FPIFGM3206B Plan and implement non-commercial thinning operations	FPIFGM3206B Plan and implement non-commercial thinning operations	Equivalent
FPIFGM3207B Coordinate stem improvement	FPIFGM3207B Coordinate stem improvement	Equivalent
FPIFGM3209B Construct and maintain forest roads and tracks	FPIFGM3209B Construct and maintain forest roads and tracks	Equivalent
FPIFGM3210B Patrol forest	FPIFGM3210B Patrol forest	Equivalent
FPIFGM3211B Manage coppice stems	FPIFGM3211B Manage coppice stems	Equivalent
FPIFGM3212 Fall trees manually (intermediate)	FPIFGM3212 Fall trees manually (intermediate)	Equivalent
FPIFGM3213 Fall trees manually (advanced)	FPIFGM3213 Fall trees manually (advanced)	Equivalent
FPIFGM3214 Operate a four-wheel drive in a towing situation	FPIFGM3214 Operate a four-wheel drive in a towing situation	Equivalent
FPIFGM3215 Perform complex four-wheel drive operations	FPIFGM3215 Perform complex four-wheel drive operations	Equivalent
FPIFGM4201B Implement a forest establishment plan	FPIFGM4201B Implement a forest establishment plan	Equivalent
FPIFGM4202B Manage stand health	FPIFGM4202B Manage stand health	Equivalent
FPIFGM4203C Design plantations	FPIFGM4203B Design plantations	Addition of item in required knowledge section Equivalent
FPIFGM4204B Conduct a pests and diseases assessment	FPIFGM4204B Conduct a pests and diseases assessment	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPIFGM4205B Monitor regeneration rates	FPIFGM4205B Monitor regeneration rates	Equivalent
FPIFGM4206B Conduct a wood volume and yield assessment	FPIFGM4206B Conduct a wood volume and yield assessment	Equivalent
FPIFGM4207B Conduct a forest site assessment	FPIFGM4207B Conduct a forest site assessment	Equivalent
FPIFGM4208B Plan a quarry	FPIFGM4208B Plan a quarry	Equivalent
FPIFGM4209B Interpret and use aerial photographs for forest management	FPIFGM4209B Interpret and use aerial photographs for forest management	Equivalent
FPIFGM4210B Prepare a tender	FPIFGM4210B Prepare a tender	Equivalent
FPIFGM5201B Plan and manage inventory program	FPIFGM5201B Plan and manage inventory program	Equivalent
FPIFGM5208B Manage road construction and maintenance	FPIFGM5208B Manage road construction and maintenance	Equivalent
FPIFGM5210A Manage tending operations in a native forest	FPIFGM5210A Manage tending operations in a native forest	Equivalent
FPIFGM5211A Coordinate stand nutrition	FPIFGM5211A Coordinate stand nutrition	Equivalent
FPIFGM5212A Manage genetic resources	FPIFGM5212A Manage genetic resources	Equivalent
FPIFGM5213A Coordinate plantation tending operations	FPIFGM5213A Coordinate plantation tending operations	Equivalent
FPIFGM5214A Develop a native forest regeneration plan	FPIFGM5214A Develop a native forest regeneration plan	Equivalent
FPIFGM5215A Breed trees	FPIFGM5215A Breed trees	Equivalent
FPIFGM5216A Manage coupe planning	FPIFGM5216A Manage coupe planning	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPIFGM5217A Promote plantations as a sustainable form of land use	FPIFGM5217A Promote plantations as a sustainable form of land use	Equivalent
FPIFGM5219 Undertake carbon stock sampling of forests and plantations	FPIFGM5218A Undertake carbon storage sampling of forests and plantations	Title changed generating code change, and further minor changes throughout Equivalent
FPIFGM6201B Plan a biochar storage system for carbon capture and storage	FPIFGM6201A Plan a biochar storage system for carbon capture and storage	Application section modified to clarify reference to native and plantation forest environments Equivalent
FPIFGM6203 Manage sustainable tree inventory	FPIFGM6202A Manage tree inventory for sustainable tree management	Title changed generating code change and further minor changes throughout, including change from 'carbon storage' to 'carbon stock' Equivalent
Harvest Operators	Harvest Operators	
FPIHAR2203B Hook up felled logs using cables (choker)	FPIHAR2203B Hook up felled logs using cables (choker)	Equivalent
FPIHAR2204B Perform landing duties (chaser)	FPIHAR2204B Perform landing duties (chaser)	Equivalent
FPIHAR2205B Conduct mobile splitting operations	FPIHAR2205B Conduct mobile splitting operations	Equivalent
FPIHAR2206B Operate a mobile chipper / mulcher	FPIHAR2206B Operate a mobile chipper / mulcher	Equivalent
FPIHAR2207A Trim and cut harvested trees	FPIHAR2207A Trim and cut harvested trees	Equivalent
FPIHAR3201B Monitor log recovery (rigging slinger)	FPIHAR3201B Monitor log recovery (rigging slinger)	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPIHAR3206C Conduct forwarder operations	FPIHAR3206C Conduct forwarder operations	Equivalent
FPIHAR3207C Conduct feller buncher operations	FPIHAR3207C Conduct feller buncher operations	Equivalent
FPIHAR3208C Conduct boom delimber operations	FPIHAR3208C Conduct boom delimber operations	Equivalent
FPIHAR3210C Conduct mechanical processor operations	FPIHAR3210C Conduct mechanical processor operations	Equivalent
FPIHAR3211B Operate yarder	FPIHAR3211B Operate yarder	Equivalent
FPIHAR3213B Conduct mechanically assisted tree falling operations	FPIHAR3213B Conduct mechanically assisted tree falling operations	Equivalent
FPIHAR3214C Operate a single grip harvester	FPIHAR3214C Operate a single grip harvester	Equivalent
FPIHAR3215C Operate heavy production mobile chipper	FPIHAR3215C Operate heavy production mobile chipper	Equivalent
FPIHAR3216A Conduct forestry operations using crawler tractor	FPIHAR3216A Conduct forestry operations using crawler tractor	Equivalent
FPIHAR3217A Conduct skidder operations	FPIHAR3217A Conduct skidder operations	Equivalent
FPIHAR3218A Conduct loader operations	FPIHAR3218A Conduct loader operations	Equivalent
FPIHAR3219A Conduct excavator operations with grabs	FPIHAR3219A Conduct excavator operations with grabs	Equivalent
FPIHAR3220 Harvest trees manually (intermediate)	FPIHAR3220 Harvest trees manually (intermediate)	Equivalent
FPIHAR3221 Harvest trees manually (advanced)	FPIHAR3221 Harvest trees manually (advanced)	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPIHAR4201B Apply tree jacking techniques	FPIHAR4201B Apply tree jacking techniques	Equivalent
FPIHAR4202B Coordinate log recovery (hook tender)	FPIHAR4202B Coordinate log recovery (hook tender)	Equivalent
FPIHAR4203B Design log landings and snig tracks	FPIHAR4203B Design log landings and snig tracks	Equivalent
FPIHAR4204B Plan and coordinate fire salvage operations	FPIHAR4204B Plan and coordinate fire salvage operations	Equivalent
FPIHAR4205B Implement harvesting plans	FPIHAR4205B Implement harvesting plans	Equivalent
FPIHAR5201B Design harvesting plans	FPIHAR5201B Design harvesting plans	Equivalent
Sawmilling and Processing	Sawmilling and Processing	
FPISAW2201B Grade round poles and debarked logs	FPISAW2201B Grade round poles and debarked logs	Equivalent
FPISAW2202B Sort boards manually	FPISAW2202B Sort boards manually	Equivalent
FPISAW2203B Sort boards mechanically	FPISAW2203B Sort boards mechanically	Equivalent
FPISAW2204B Dock boards with mechanical feed	FPISAW2204B Dock boards with mechanical feed	Equivalent
FPISAW2205B Assemble materials using nail plates	FPISAW2205B Assemble materials using nail plates	Equivalent
FPISAW2206B De-stack seasoning racks	FPISAW2206B De-stack seasoning racks	Equivalent
FPISAW2207B Round softwood logs	FPISAW2207B Round softwood logs	Equivalent
FPISAW2208B Split wood products	FPISAW2208B Split wood products	Equivalent
FPISAW2209B Dismantle,	FPISAW2209B Dismantle,	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
transport and assemble hand portable sawmill	transport and assemble hand portable sawmill	
FPISAW2210B Prepare for timber treatment operations	FPISAW2210B Prepare for timber treatment operations	Equivalent
FPISAW3201B Treat timber	FPISAW3201B Treat timber	Equivalent
FPISAW3202B Produce sawn green boards	FPISAW3202B Produce sawn green boards	Equivalent
FPISAW3203B Break down logs	FPISAW3203B Break down logs	Equivalent
FPISAW3204B Saw flitches and cants	FPISAW3204B Saw flitches and cants	Equivalent
FPISAW3205B Dry hardwood	FPISAW3205B Dry hardwood	Equivalent
FPISAW3206B Dry softwood	FPISAW3206B Dry softwood	Equivalent
FPISAW3207B Sharpen band saws	FPISAW3207B Sharpen band saws	Equivalent
FPISAW3208B Sharpen circular saws	FPISAW3208B Sharpen circular saws	Equivalent
FPISAW3209B Align sawing production systems	FPISAW3209B Align sawing production systems	Equivalent
FPISAW3210B File and set saws	FPISAW3210B File and set saws	Equivalent
FPISAW3211B Recondition guides	FPISAW3211B Recondition guides	Equivalent
FPISAW3212B Sharpen tipped circular saws	FPISAW3212B Sharpen tipped circular saws	Equivalent
FPISAW3213B Level and tension circular saws	FPISAW3213B Level and tension circular saws	Equivalent
FPISAW3214B Join band saw blades	FPISAW3214B Join band saw blades	Equivalent
FPISAW3215B Screen wood	FPISAW3215B Screen wood	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
chips	chips	
FPISAW3216B Transfer wood chips	FPISAW3216B Transfer wood chips	Equivalent
FPISAW3217B Hard face saw teeth	FPISAW3217B Hard face saw teeth	Equivalent
FPISAW3218B Replace tungsten tips	FPISAW3218B Replace tungsten tips	Equivalent
FPISAW3219B Replace stellite tips	FPISAW3219B Replace stellite tips	Equivalent
FPISAW3220C Maintain wide band saw blades	FPISAW3220B Maintain wide band saw blades	Data entry error in numbering of performance criteria in elements 1 and 2 corrected Equivalent
FPISAW3221B Profile saw blanks	FPISAW3221B Profile saw blanks	Equivalent
FPISAW3222B Recondition band mill wheels	FPISAW3222B Recondition band mill wheels	Equivalent
FPISAW3223B Assess wood chips	FPISAW3223B Assess wood chips	Equivalent
FPISAW3224B Coordinate and monitor the wood chip stockpile	FPISAW3224B Coordinate and monitor the wood chip stockpile	Equivalent
FPISAW3225B Maintain frame saw blades	FPISAW3225B Maintain frame saw blades	Equivalent
FPISAW3226B Saw logs using CNC optimising systems	FPISAW3226B Saw logs using CNC optimising systems	Equivalent
FPISAW3227B Select and saw logs in multi-species operations	FPISAW3227B Select and saw logs in multi-species operations	Equivalent
FPISAW3228B Apply principles of blade design to sawing procedures	FPISAW3228B Apply principles of blade design to sawing procedures	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPISAW3229B Operate a portable sawmill	FPISAW3229B Operate a portable sawmill	Equivalent
FPISAW4201B Plan and monitor timber treatment plant operations	FPISAW4201B Plan and monitor timber treatment plant operations	Equivalent
FPISAW4202B Plan and monitor saw log operations	FPISAW4202B Plan and monitor saw log operations	Equivalent
FPISAW4203B Coordinate timber drying operations	FPISAW4203B Coordinate timber drying operations	Equivalent
FPISAW4204B Plan and monitor board conversion	FPISAW4204B Plan and monitor board conversion	Equivalent
Timber Manufactured Products	Timber Manufactured Products	
FPITMM2201B Cut material to length and angles	FPITMM2201B Cut material to length and angles	Equivalent
FPITMM2202B Machine material	FPITMM2202B Machine material	Equivalent
FPITMM2203A Read and interpret timber truss, floor and/or frame fabrication plans	FPITMM2203A Read and interpret timber truss, floor and/or frame fabrication plans	Equivalent
FPITMM3201B Convert timber	FPITMM3201B Convert timber	Equivalent
FPITMM3202B Manufacture using joinery machines	FPITMM3202B Manufacture using joinery machines	Equivalent
FPITMM3203B Estimate and cost job	FPITMM3203B Estimate and cost job	Equivalent
FPITMM3204A Interpret designs to prepare timber roof truss drawings and documents using computers	FPITMM3204A Interpret designs to prepare timber roof truss drawings and documents using computers	Equivalent
FPITMM3205A Interpret designs to prepare timber floor system drawings and	FPITMM3205A Interpret designs to prepare timber floor system drawings and	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
documents using computers	documents using computers	
FPITMM3206A Interpret designs to prepare timber wall frame drawings and documents using computers	FPITMM3206A Interpret designs to prepare timber wall frame drawings and documents using computers	Equivalent
FPITMM3207A Set up timber floor trusses	FPITMM3207A Set up timber floor trusses	Equivalent
FPITMM4201B Construct prototypes and samples	FPITMM4201B Construct prototypes and samples	Equivalent
FPITMM4202B Diagnose and calculate production costs	FPITMM4202B Diagnose and calculate production costs	Equivalent
FPITMM4203B Install and commission CNC software	FPITMM4203B Install and commission CNC software	Equivalent
FPITMM4204B Sample and test products to specifications	FPITMM4204B Sample and test products to specifications	Equivalent
FPITMM4205A Prepare and advise on a broad range of timber roof truss details using computers	FPITMM4205A Prepare and advise on a broad range of timber roof truss details using computers	Equivalent
FPITMM4206A Prepare and advise on a broad range of timber floor system details using computers	FPITMM4206A Prepare and advise on a broad range of timber floor system details using computers	Equivalent
FPITMM4207A Prepare and advise on a broad range of timber wall frame details using computers	FPITMM4207A Prepare and advise on a broad range of timber wall frame details using computers	Equivalent
FPITMM5201B Assess product feasibility of designs	FPITMM5201B Assess product feasibility of designs	Equivalent
FPITMM5202B Develop, trial and evaluate prototypes	FPITMM5202B Develop, trial and evaluate prototypes	Equivalent
FPITMM5203B Generate and transfer complex computer-aided drawings and	FPITMM5203B Generate and transfer complex computer-aided drawings and	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
specifications	specifications	
FPITMM5204B Manage product design	FPITMM5204B Manage product design	Equivalent
FPITMM5205B Optimise CNC operations	FPITMM5205B Optimise CNC operations	Equivalent
FPITMM5206B Plan production	FPITMM5206B Plan production	Equivalent
Wood Panel and Board Production	Wood Panel and Board Production	
FPIWPP2201B Cut panels	FPIWPP2201B Cut panels	Equivalent
FPIWPP2202B Surface treat raw board	FPIWPP2202B Surface treat raw board	Equivalent
FPIWPP2203B Repair veneer and ply	FPIWPP2203B Repair veneer and ply	Equivalent
FPIWPP2204B Repair veneer mechanically	FPIWPP2204B Repair veneer mechanically	Equivalent
FPIWPP2205B Prepare chip or fibre blends	FPIWPP2205B Prepare chip or fibre blends	Equivalent
FPIWPP2206B Prepare veneer for ply	FPIWPP2206B Prepare veneer for ply	Equivalent
FPIWPP2207B Scarf edges of veneer	FPIWPP2207B Scarf edges of veneer	Equivalent
FPIWPP2208B Cut veneer	FPIWPP2208B Cut veneer	Equivalent
FPIWPP2209B Saw products from continuous ply	FPIWPP2209B Saw products from continuous ply	Equivalent
FPIWPP2210B Cut panels to profile	FPIWPP2210B Cut panels to profile	Equivalent
FPIWPP2211B Move material by transfer equipment	FPIWPP2211B Move material by transfer equipment	Equivalent
FPIWPP3201B Produce	FPIWPP3201B Produce	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
veneer from debarked logs	veneer from debarked logs	
FPIWPP3202B Paint panels	FPIWPP3202B Paint panels	Equivalent
FPIWPP3203B Produce fibre from chips	FPIWPP3203B Produce fibre from chips	Equivalent
FPIWPP3204B Form board	FPIWPP3204B Form board	Equivalent
FPIWPP3205B Match and join veneer	FPIWPP3205B Match and join veneer	Equivalent
FPIWPP3206B Laminate and veneer board surfaces	FPIWPP3206B Laminate and veneer board surfaces	Equivalent
FPIWPP3207B Clip veneer	FPIWPP3207B Clip veneer	Equivalent
FPIWPP3208B Punch peg holes in panels	FPIWPP3208B Punch peg holes in panels	Equivalent
FPIWPP3209B Prepare resin and additives	FPIWPP3209B Prepare resin and additives	Equivalent
FPIWPP3210B Laminate board	FPIWPP3210B Laminate board	Equivalent
FPIWPP3211B Maintain caul plates and screens	FPIWPP3211B Maintain caul plates and screens	Equivalent
FPIWPP3212B Dry material	FPIWPP3212B Dry material	Equivalent
FPIWPP3213B Heat treat material	FPIWPP3213B Heat treat material	Equivalent
FPIWPP3214B Treat paper	FPIWPP3214B Treat paper	Equivalent
FPIWPP3215B Cut paper	FPIWPP3215B Cut paper	Equivalent
FPIWPP3216B Press material using the daylight process	FPIWPP3216B Press material using the daylight process	Equivalent
FPIWPP3217B Process production effluent	FPIWPP3217B Process production effluent	Equivalent
FPIWPP3218B Coordinate machining of panels	FPIWPP3218B Coordinate machining of panels	Equivalent

Unit code and title FPI11 V 2.1	Unit code and title FPI11 V1.1	Relationship
FPIWPP3219B Blend and test binding mixes	FPIWPP3219B Blend and test binding mixes	Equivalent
FPIWPP3220B Plan and coordinate panel painting	FPIWPP3220B Plan and coordinate panel painting	Equivalent
FPIWPP3221B Trim new panels to size	FPIWPP3221B Trim new panels to size	Equivalent
FPIWPP3222B Press laminated ply	FPIWPP3222B Press laminated ply	Equivalent
FPIWPP3223B Immunise veneer	FPIWPP3223B Immunise veneer	Equivalent
FPIWPP3224B Profile sand products	FPIWPP3224B Profile sand products	Equivalent
FPIWPP3225B Produce profile sanding shoes and wheels	FPIWPP3225B Produce profile sanding shoes and wheels	Equivalent
FPIWPP3226B Operate a continuous press	FPIWPP3226B Operate a continuous press	Equivalent
FPIWPP3227B Vacuum paint	FPIWPP3227B Vacuum paint	Equivalent
FPIWPP3228A Dry wood flakes	FPIWPP3228A Dry wood flakes	Equivalent
FPIWPP3229B Classify flake	FPIWPP3229B Classify flake	Equivalent
FPIWPP3230B Produce decorative veneers	FPIWPP3230B Produce decorative veneers	Equivalent
FPIWPP3231B Produce veneer from prepared flitches	FPIWPP3231B Produce veneer from prepared flitches	Equivalent
FPIWPP4201B Plan and coordinate panel production	FPIWPP4201B Plan and coordinate panel production	Equivalent
FPIWPP4202B Perform laboratory testing	FPIWPP4202B Perform laboratory testing	Equivalent

Overview

What is a training package

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

Each Training Package:

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

How do Training Packages fit within the National Skills Framework?

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

How are Training Packages developed?

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

How do Training Packages encourage flexibility?

Training Packages describe the skills and knowledge needed to perform effectively in the workplace without prescribing how people should be trained.

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

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

Who can deliver and assess using Training Packages?

Training and assessment using Training Packages must be conducted by a Registered

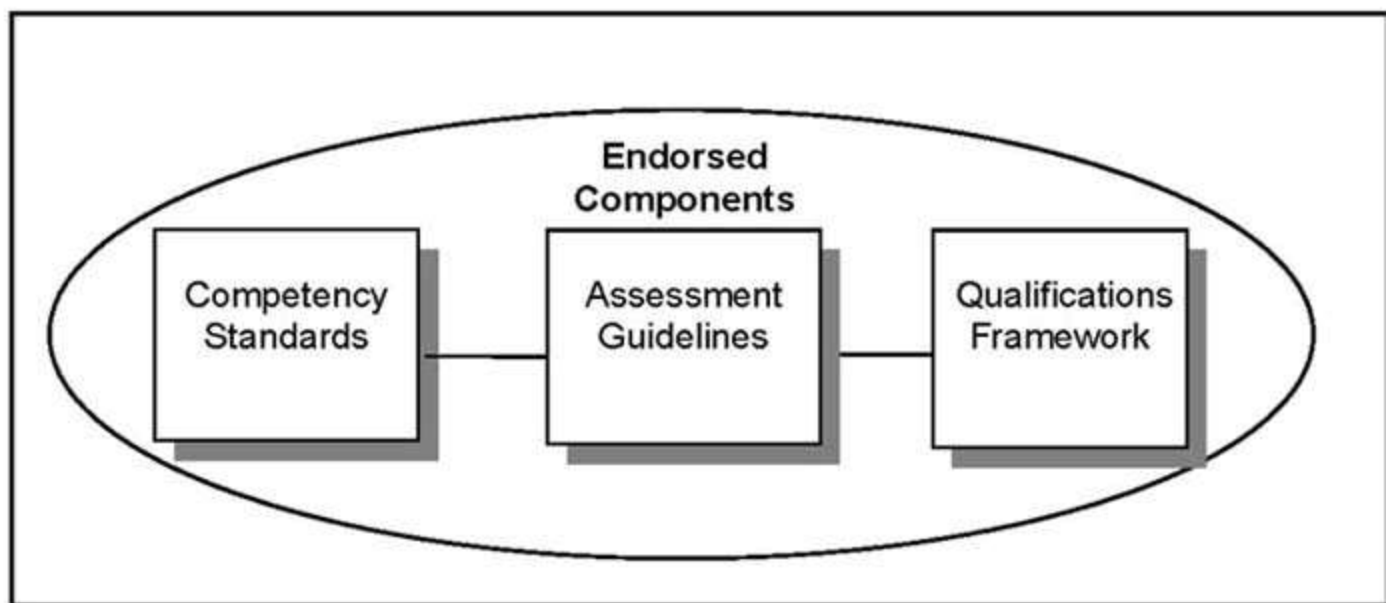
Training Organisation (RTO) that has the qualifications or specific units of competency on its scope of registration, or that works in partnership with another RTO, as specified in the AQTF 2010.

Training Package Components

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

Training Package Endorsed Components

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



Competency Standards

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

Assessment Guidelines

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

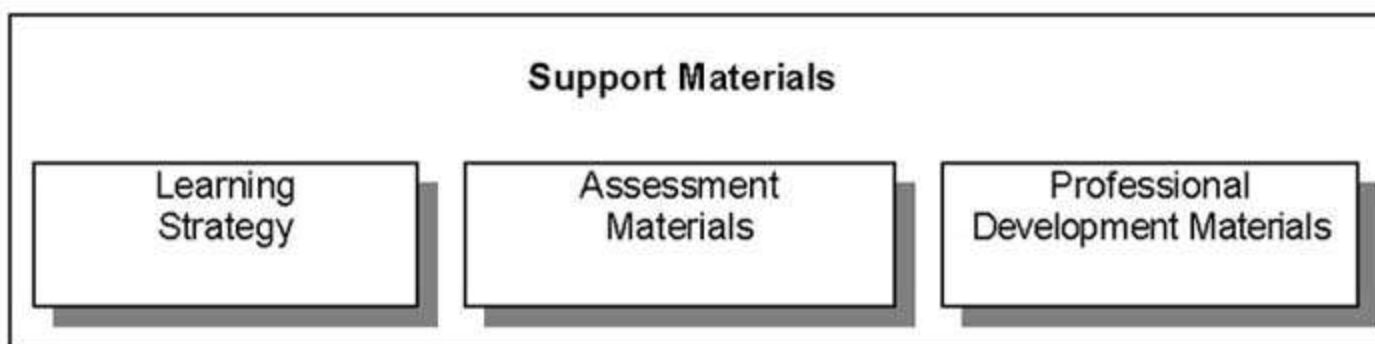
Qualifications Framework

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

Training Package Support Materials

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

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



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

Training Package, Qualification and Unit of Competency Codes

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

Training Package Codes

Each Training Package has a unique five-character national code assigned when the Training Package is endorsed, for example FPI05. The first three characters are letters identifying the Training Package industry coverage and the last two characters are numbers identifying the year of endorsement.

Qualification Codes

Within each Training Package, each qualification has a unique eight-character code, for example FPI50111.

- the first three letters identify the Training Package;
- the first number identifies the qualification level (noting that, in the qualification titles themselves, arabic numbers are **not** used;

- the next two numbers identify the position in the sequence of the qualification at that level; and
- the last two numbers identify the year in which the qualification was endorsed. (Where qualifications are added after the initial Training Package endorsement, the last two numbers may differ from other Training Package qualifications as they identify the year in which those particular qualifications were endorsed.)

Unit of Competency Codes

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

- a typical code is made up of 12 characters, normally a mixture of uppercase letters and numbers, as in FPISAW2201A;
- the first three characters signify the Training Package (FPI11 Forest and Forest Products Training Package in the above example) and up to eight characters, relating to an industry sector, function or skill area, follow;
- the last character is always a letter and identifies the unit of competency version. An 'A' at the end of the code indicates that this is the original unit of competency. 'B', or another incremented version identifier means that minor changes have been made. Typically this would mean that wording has changed in the range statement or evidence guide, providing clearer intent; and where changes are made that alter the outcome, a new code is assigned and the title is changed.

The uppercase letters in the codes for Forest and Forest Products Industry units of competency correspond to the industry sectors as follows:

FPICOR	Denotes Core units of competency
FPICOT	Denotes Common Technical units of competency (which are common to more than one sector of the industry)
FPIFGM	Denotes units of competency within the Forest Growing and Management sector
FPIHAR	Denotes units of competency within the Harvesting and Haulage sector
FPISAW	Denotes units of competency within the Sawmilling and Processing sector
FPIWPP	Denotes units of competency within the Wood Panel and Board Production sector
FPITMM	Denotes units of competency within the Timber Manufactured Products and Timber Merchandising sector

Imported units of competency retain the codes from their Training Package of origin.

Contextualisation Advice for Unit of Competency Codes in FPI11

Unit of Competency version control in this Training Package uses a new explicit 'Revision Number' as follows:

- Revision 1 indicates that this is the original unit of competency.
- Revision 2 or above means that minor changes have been made. For example FPICOT2235A becomes FPICOT2235A, Revision 2 rather than FPICOT2235B. Typically this level of revision would mean that wording has changed in the range statement or evidence guide, providing clearer unit intent.

The individual Unit of Competency 'Revision Number' is displayed in training.gov.au (TGA) and on the cover page of the published unit. The FPI11 Training Package incorporates these changes as follow:

- Codes allocated before the introduction of TGA will be retained indefinitely. However, the 'A', 'B', 'C' component of the code will no longer be incremented. Instead an explicit Unit of Competency 'Revision Number' will be used
- New unit codes will not include an 'A', 'B', 'C' suffix. As such all new codes will contain 11 Characters. For example FPIFGM3212
- Where changes are made that alter the outcome of the unit, a new code is assigned and the title is changed.

Training Package, Qualification and Unit of Competency Titles

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

Training Package Titles

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

Qualification Titles

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

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

For example:

- FPI20111 Certificate II in Forest Growing and Management
- FPI50111 Diploma of Forest and Forest Products.

Unit of Competency Titles

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

For example:

- FPICOT2201B Stack and bind material

- FPISAW3201B Treat timber.
-

Introduction to FPI11 V2.1

The Industry

The Forest and Forest Products Industry covers a diverse range of activities from growing and management of plantation and native forest resources, through harvesting, sawmilling and processing, to the manufacture, merchandising and retailing of finished products.

The industry is characterised by a mix of small, medium and large enterprises. Some enterprises show a high degree of vertical integration, being involved in activities across the six industry sectors. The six industry sectors are:

- Forest Growing and Management
- Harvesting and Haulage
- Sawmilling and Processing
- Timber Manufactured Products
- Timber Merchandising
- Wood Panel Products.

Forest Growing and Management has traditionally been dominated by very large organisations, usually either State owned, or associated with large downstream manufacturing operations. A new category of forest growers are the agroforesters, or farm foresters, who often run plantations as micro-businesses attached to a commercial farm.

Activities in the Forest Growing and Management sector generally involve the planting, tending, protection and preparation of trees for harvesting, including the general environmental management of the land and land usage. Forests are maintained not only for the production of timber products, but for conservation, land protection, recreational, social and scientific purposes.

Harvesting and Haulage typically involves small enterprises employing the 4-6 people needed to run a single logging crew. Harvesting operators usually have a contractual relationship with their suppliers (forest owners) and customers (sawmillers and manufacturers of various types), rather than an open-market relationship.

Forest harvesting is carried out in both native hardwood forests and softwood or hardwood plantations. Jobs in this sector, typically involving outdoor work, can include activities such as construction of roads and log-landings, harvesting trees either mechanically or manually, plant and equipment operation, shifting tree lengths into various products and grades of product, grading of sawlogs, loading logs for delivery to specified processing plants, and undertaking rehabilitation works to rejuvenate forest coupes (areas from which trees are harvested).

Sawmilling and Processing is comprised of small, medium and large organisations that undertake a range of activities. These include log sawmilling, production of hardwood and softwood chips for use by other sectors of the industry, and value adding through planing and moulding activities (including finger jointing), preservative treatment, kiln drying, the production of landscape bark and chips, production of flooring and joinery products, component manufacturing and planing, moulding and machining.

Increasingly, enterprises involved in sawmilling and processing are highly mechanised and rely on computer technology to control the production process.

Timber Manufactured Products comprises small, medium and large enterprises and is involved in the production of a wide range of products including doors, windows and prefabricated trusses and frames, for the construction industry. Other enterprises produce pallets, casks, boxes, crates etc. for agricultural and industrial use.

Enterprises employ skilled tradespeople (eg carpenters, joiners, builders and maintenance mechanics) as well.

Timber Merchandising outlets range from small ‘corner-shop’ timber and hardware stores to large national chains. Industry seems to be trending away from small independent stores towards larger businesses, or groups of small businesses coming together under the banner of a franchise. This sector includes:

- Wholesale distributors who import timber and wood or buy from local manufacturers for sale to merchants and other large volume clients. They are often associated with large timber producers and are usually based in capital cities or major regional centres.
- Merchants who sell to trade users of timber products. They usually handle many different types of timber species and products, bought from a large number of suppliers. They may provide ancillary services, eg. Quantities and sizes to order, drying, moulding etc.
- Retailers who sell timber products and associated hardware in smaller quantities to individual tradespeople and the general public. The emphasis is on display, customer service and packaging.
- **Wood Panel Products** is predominantly comprised of large enterprises due to high costs involved in establishing efficient production facilities. Activities in the wood panel products sector include the manufacture of veneers, plywood, particle board and medium density fibre board (MDF).

The manufacture of wood panel products is a highly mechanised, technology driven production process.

Qualifications Framework

What is the Australian Qualifications Framework?

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

<http://www.aqf.edu.au/wp-content/uploads/2013/05/AQF-2nd-Edition-January-2013.pdf>

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

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

Qualifications

Training Packages can incorporate the following eight AQF qualifications.

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

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

Statement of Attainment

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

Standards for Initial and Continuing Registration.

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

AQF Guidelines and Learning Outcomes

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

Certificate I

Characteristics of Learning Outcomes

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

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

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate knowledge by recall in a narrow range of areas;
- demonstrate basic practical skills, such as the use of relevant tools;
- perform a sequence of routine tasks given clear direction
- receive and pass on messages/information.

Certificate II

Characteristics of Learning Outcomes

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

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

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

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

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

Certificate III

Characteristics of Learning Outcomes

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

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

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

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

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

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

Certificate IV

Characteristics of Learning Outcomes

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

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

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating some theoretical concepts
- apply solutions to a defined range of unpredictable problems
- identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas
- identify, analyse and evaluate information from a variety of sources

- take responsibility for own outputs in relation to specified quality standards
- take limited responsibility for the quantity and quality of the output of others.

Diploma

Characteristics of Learning Outcomes

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

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

Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team co-ordination may be involved.

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

Distinguishing Features of Learning Outcomes

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

- demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas
- analyse and plan approaches to technical problems or management requirements
- transfer and apply theoretical concepts and/or technical or creative skills to a range of situations
- evaluate information, using it to forecast for planning or research purposes
- take responsibility for own outputs in relation to broad quantity and quality parameters
- take some responsibility for the achievement of group outcomes.

Advanced Diploma

Characteristics of Learning Outcomes

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

The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or

strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved.

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

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

Distinguishing Features of Learning Outcomes

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

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

Vocational Graduate Certificate

Characteristics of competencies or learning outcomes

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

Distinguishing features of learning outcomes

- Demonstrate the self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major broad or technical and management functions in highly varied and highly specialised contexts.
- Generate and evaluate ideas through the analysis of information and concepts at an abstract level.

- Demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills in complex contexts.
 - Demonstrate responsibility and broad-ranging accountability for the structure, management and output of the work or functions of others.

Vocational Graduate Diploma

Characteristics of competencies or learning outcomes

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

Distinguishing features of learning outcomes

- Demonstrate the self-directed development and achievement of broad and highly specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major functions, both broad and within highly varied and highly specialised contexts.
- Generate and evaluate complex ideas through the analysis of information and concepts at an abstract level.
- Demonstrate an expert command of wide-ranging, highly specialised, technical, creative or conceptual skills in complex and highly specialised or varied contexts.
- Demonstrate full responsibility and accountability for personal outputs.
- Demonstrate full responsibility and accountability for all aspects of the work or functions of others, including planning, budgeting and strategy.

Qualifications and Packaging Rules

Forest and Forest Products Industry Qualifications

Background

The qualifications structure of FPI11:

- supports both general and sector specific qualification pathways
- provides effective qualifications at the higher AQF levels (Certificate IV and Diploma) that suit industry needs for a technical qualification and a management focused qualification, or a balance of both
- provides qualifications consisting of a small core to ensure flexibility by allowing people to choose electives to suit their job outcomes and future job choices
- allows achievement of ‘skills sets’ within qualifications if achievement of a total qualification is not required.

The qualifications structure incorporates the outcomes of extensive industry consultation which determined that qualifications should:

- provide maximum flexibility to allow enterprises and individuals to select combinations of units of competency relevant to their training needs
- reflect any State or Territory licensing requirements
- recognise different entry points and development pathways
- recognise the trades of Sawdoctoring and Woodmachining as discrete qualifications
- reflect realities in terms of work organisation and job design
- allow for articulation between qualifications
- create career path opportunities for people within the industry.

Structure of the Qualifications

The qualification packaging rules provide maximum flexibility through the identification of mandatory units to meet occupational requirements, provision of a choice of electives to ensure enterprise needs are met, and the incorporation of relevant units from other endorsed Training Packages to facilitate portability of qualifications.

Units within qualifications are arranged in the following broad categories:

- **Core Units**

Includes identified compulsory or 'core' units which provide generic skills, for example in areas such as communication, OHS, working effectively, quality, the environment, teamwork and first aid.

- **Elective Units**

Includes 'sector' electives to meet the requirements of technical functional areas. Units have been placed into specialist 'streams' or skills sets such as fire control, harvesting operations, timber products, sawing operations, merchandising etc. Units in this group are generally technical in nature with outcomes directly relevant to the Forest and Forest Products Industry.

Includes 'common' electives to meet the requirements of common functional areas. Units have been placed into streams such as administration and business, load handling, communication and relationships, machinery and equipment etc. Units in this group are generally cross-industry in nature.

FPI11 allows customisation of qualifications through a choice of up to two or three (depending on the qualification) electives from FPI11, other nationally endorsed Training Packages, or State/Territory accredited courses. Generally, electives from this category must be either aligned to the same AQF level outcomes, or aligned to one AQF level up or down from the level of the qualification.

The packaging of the units of competency complements, but does not infringe on the responsibilities and requirements of State and Territory based regulatory authorities. An individual seeking a qualification for a position covered by State or Territory regulatory requirements should check with the relevant Act and regulatory authority, the employer and the RTO providing the training and assessment, when selecting elective units of competency to complete a qualification.

Access, Equity and Cultural Diversity

The skills required of employees in the Forest and Forest Products Industry are comprehensive and many employment opportunities are available. The qualifications in this Training Package reflect the required range of competencies and are written in a non-exclusive manner so as to increase the participation rates of all equity and disadvantaged groups and to minimise unintentional bias.

The Forest and Forest Products Industry recognises the importance of access and equity and is committed to ensuring that access to employment and training is available regardless of gender, socio-economic background, disability, ethnic origin, age or race. Catering for differences may involve adapting the physical environment, equipment, and training and assessment materials for learners. An inclusive environment is one that acknowledges and values the variations between people and cultures. It recognises and embraces difference and provides the means by which all clients have the greatest opportunity to achieve their goals.

Qualification Pathways

The following pathways charts are provided to show the types of pathways into and from qualifications that are possible with this Training Package. For more information about qualifications and pathways contact ForestWorks ISC.

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Forest and Forest Products Industry qualifications can be achieved via a variety of pathways and training delivery and assessment options. Possible pathways include:

- work-based training and assessment
- a mixture of institution-based training and assessment and work-based training and assessment
- recognition of prior learning and current competency (RPL/RCC)
- recognition of prior learning combined with further training, as required.

In considering pathways it is important to note that assessment for the issuing of an AQF qualification in some sectors of the Forest and Forest Products Industry may be conducted in the workplace or in a simulated situation where issues of safety and/or environmental damage are limiting factors. On-the-job assessment conducted in the workplace or in a simulated situation ensures that candidates can function effectively in the real work environment and that the competencies assessed are relevant to the work site or industry.

This Training Package provides open entry at each of the AQF levels. Open entry is available at all levels provided the prospective learner's general education and competency level is equivalent to the outcome of four to five years of secondary school. Additionally, entry levels provide an option for potential learners to choose a qualification suited to their needs while providing flexibility for recruitment action by employers. Entry into all qualifications is also available through progression from a lower level qualification, and Recognition of Prior Learning (RPL) arrangements.

Sector Qualifications

Entry-level qualification

The FPI1011 Certificate I in Forest and Forest Products is an 'entry-level' qualification within the Training Package to cover the basic entry level functions of an operator in the industry. These include core skills and knowledge relating to communication, working effectively in the industry, following environmental care and OHS procedures, and maintaining quality and product care.

Forest Growing and Management Sector

In general, jobs in this sector are focused at AQF levels 2 and 3 covering a range of activities from planting, weeding, pruning and pest management, to falling trees, fire management and construction and maintenance of roads. Two qualifications at these levels are provided for employees in the Forest Growing and Management sector:

- FPI20113 Certificate II in Forest Growing and Management, and
- FPI30113 Certificate III in Forest Growing and Management.

This sector also calls for higher level technical skills in forest management, with a natural progression to the FPI40111 Certificate IV in Forest Operations. This qualification provides a balance of supervisory functions together with technical skills in areas such as fire control, breeding and propagation, site establishment and maintenance, tree growing and maintenance.

Harvesting and Haulage Sector

Jobs in this sector are mainly focused at the operator level at AQF 3. The sector covers a range of activities from construction of roads and log-landings, plant and equipment operation, harvesting trees, to stump removal and segregating or sorting logs. Two qualifications at AQF levels 2 and 3 are provided for employees in the Harvesting and Haulage sector:

- FPI20213 Certificate II in Harvesting and Haulage, and
- FPI30213 Certificate III in Harvesting and Haulage.

A natural path for these operators is progression to the FPI40111 Certificate IV in Forest Operations which provides a balance of supervisory responsibilities together with technical skills in areas such as fire control, harvesting operations, machinery and equipment.

Sawmilling and Processing Sector

Jobs in this sector are focused at AQF levels 2 and 3 covering a range of activities from sawing logs, producing hardwood or softwood chips, kiln drying, conducting end matching and finger jointing operations, to weighing loads. Two qualifications at these levels are provided for employees in the Sawmilling and Processing sector:

- FPI20311 Certificate II in Sawmilling and Processing, and
- FPI30311 Certificate III in Sawmilling and Processing.

A natural path for these operators is progression to the FPI40211 Certificate IV in Timber Processing which provides a balance of supervisory responsibilities together with technical skills in areas such as grading and testing, timber treatment and drying, sawing operations and competitive manufacturing.

Wood Panel Products Sector

Jobs in this sector are focused at AQF levels 2 and 3 covering a range of activities from producing veneer, machining panel, laminating boards and assembling products, to chipping or flaking wood and cutting panels to profile. Two qualifications at these levels are provided for employees in the Wood Panel Products sector:

- FPI20411 Certificate II in Wood Panel Products, and
- FPI30411 Certificate III in Wood Panel Products.

A natural path for these operators is progression to the FPI40211 Certificate IV in Timber Processing which provides a balance of supervisory responsibilities together with technical skills in areas such as board and veneer production, timber products, timber treatment and drying, grading and testing and competitive manufacturing.

Timber Manufactured Products Sector

Jobs in this sector are focused at AQF levels 2 and 3 covering a range of activities from dressing boards and timber, cutting material using computer programmed machinery to assembling products. Two qualifications at these levels are provided for employees in the Timber Manufactured Products sector:

- FPI20511 Certificate II in Timber Manufactured Products, and
- FPI30511 Certificate III in Timber Manufactured Products.

A natural path for these operators is progression to the FPI40211 Certificate IV in Timber Processing which provides a balance of supervisory responsibilities together with technical skills in areas such as grading and testing, timber products, trusses and frames, logyard and material preparation and competitive manufacturing.

Additionally, qualifications designed specifically for the Truss and Frame sector of the industry now cover the complete range of jobs in both manufacture and design in this highly specialised area:

- FPI20711 Certificate II in Timber Truss and Frame Design and Manufacture
- FPI30911 Certificate III in Timber Truss and Frame Design and Manufacture
- FPI40311 Certificate IV in Timber Truss and Frame Manufacture
- FPI40411 Certificate II in Timber Truss and Frame Design
- FPI50311 Diploma of Timber Truss and Frame Manufacture
- FPI50411 Diploma of Timber Truss and Frame Design

Timber Merchandising Sector

Jobs in this sector are focused at AQF levels 2 and 3 covering a range of activities from stock control, estimating and costing jobs, cutting and machining material and grading products, to sales and customer service. Two qualifications at these levels are provided for employees in the Timber Merchandising sector:

- FPI20611 Certificate II in Timber Merchandising, and
- FPI30611 Certificate III in Timber Merchandising.

A natural path for these operators is progression to the FPI40211 Certificate IV in Timber Processing which provides a balance of supervisory responsibilities together with technical skills in areas such as logyard and material preparation and retail.

Trades

There are two trade qualifications at the AQF 3 level. The FPI30711 Certificate III in Sawdoctoring provides specialist coverage of sawdoctoring competencies, for example hand sharpening knives and blades, welding, aligning sawing production systems and assessing and maintaining saw and cutter performance. This qualification will ensure the integrity of the sawdoctoring trade by maintaining an appropriate depth of knowledge and skills and level of technical competence in sawdoctoring.

The FPI30811 Certificate III in Woodmachining also provides some specialist coverage of sawdoctoring competencies, but has a focus on an in-depth knowledge of timber technology. Progression from the trades would naturally be to FPI40211 Certificate IV in Timber Processing.

Diploma Qualifications

The FPI50111 Diploma of Forest and Forest Products provides a management pathway for all qualifications within the Training Package. While there is a balance between technical and generic management outcomes within the qualification, there is an emphasis on management, for example in areas such as planning and managing inventory programs, genetic resources, propagation programs, native forest regeneration, product design and panel production.

Diploma qualifications for the Timber Truss and Frame:

FPI50311 Diploma of Timber Truss and Frame Manufacture

FPI50411 Diploma of Timber Truss and Frame Design

Advanced Diploma Qualification

The FPI60113 Advanced Diploma of Forest Industry Sustainability recognises the emerging needs of the industry to provide pathways and links to the higher education sector via graduate certificate or degree programs in forestry or environmental science such as the new Graduate Certificate in Timber (Processing and Building) at the Centre for Sustainable Architecture with Wood, University of Tasmania.

Introduction to the Industry

Introduction to the Industry

The Forest and Forest Products Industry covers a diverse range of activities from growing and management of plantation and native forest resources, through harvesting, sawmilling and processing, to the manufacture, merchandising and retailing of finished products.

The industry is characterised by a mix of small, medium and large enterprises. Some enterprises show a high degree of vertical integration, being involved in activities across the six industry sectors. The six industry sectors are:

- Forest Growing and Management
- Harvesting and Haulage
- Sawmilling and Processing
- Timber Manufactured Products
- Timber Merchandising
- Wood Panel Products.

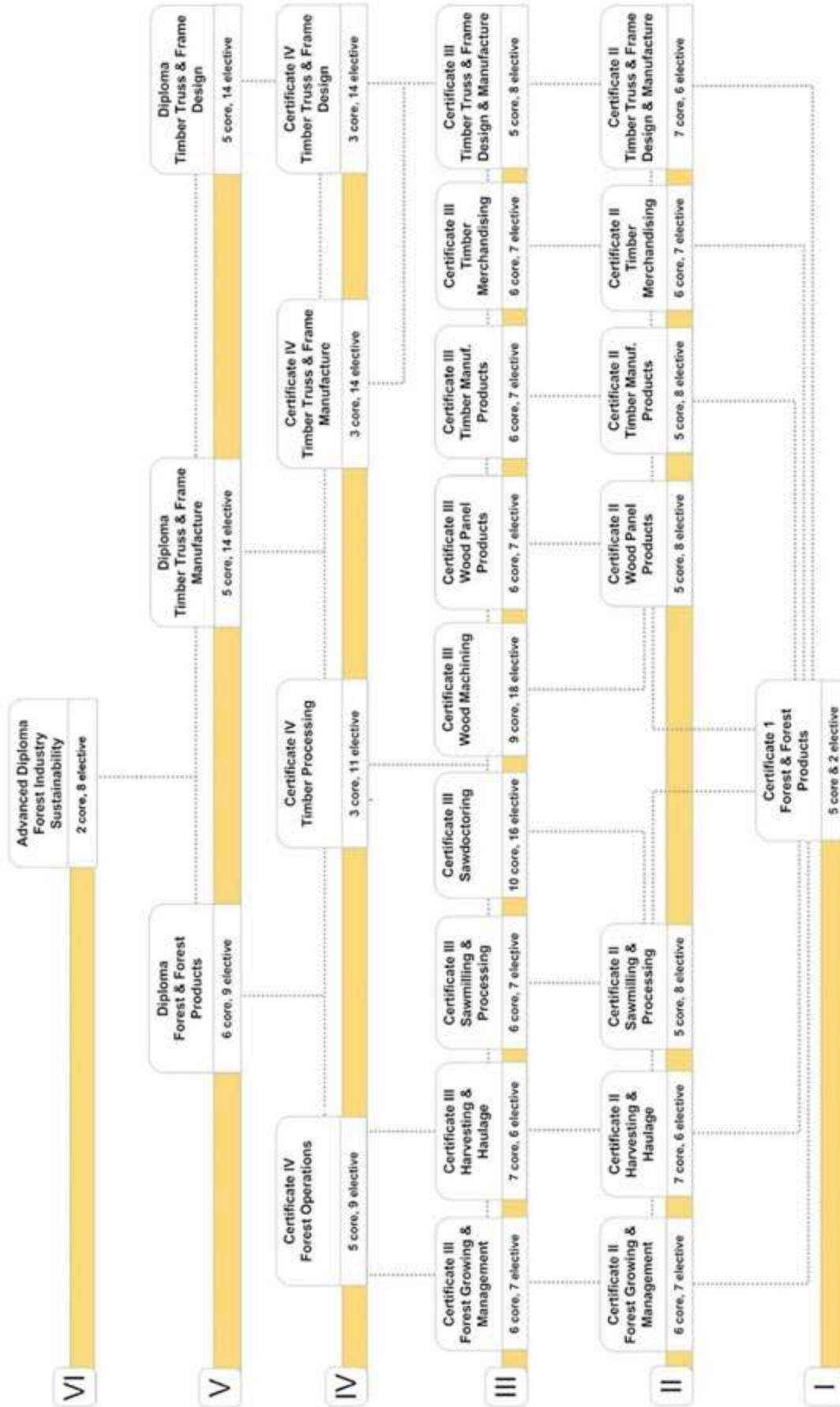
Skill Sets in this Training Package

Skill set for a boom delimeter operator
Skill set for a crawler/dozer operator
Skill set for a feller buncher operator
Skill set for a forwarder operator
Skill set for a heavy production mobile chipper operator
Skill set for a loader operator
Skill set for a mechanical processor operator
Skill set for a native forest operator
Skill set for a plantation forest operator
Skill set for a single grip harvester operator
Skill set for a skidder operator
Skill set for an excavator operator
Skill set for fire salvage operations
Skill set for off road four wheel drive operations
Skill set for soil and water protection (roading)
Skill set for carbon accounting
Skill set for a forestry log truck driver
Skill set for a forestry produce truck driver
Skill set for a finger jointing grader operator
Skill set for a finger jointing moulder operator
Skill set for a finger jointing plant operator
Skill set for a finger jointing quality control tester
Skill set for forest and wood product innovation for leaders
Skill set for forest and wood product innovation for managers

Skill set for supporting forest and wood products innovation
Skill set for managing change in the forest and wood products industry
Skill set for forest and wood products industry stakeholder engagement
Skill set for supporting workplace engagement in forest and wood products
Skill set for leading business development in the forest and wood products industry
Skill set for managing business development in the forest and wood products industry
Skill set for supporting business development in the forest and wood products industry

Qualification Pathways

Pathways Chart - FPI11



Assessment Guidelines

Introduction

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

Assessment System Overview

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

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

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

Assessment must be carried out in accordance with the:

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

Benchmarks for Assessment

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

Principles of Assessment

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

- validity
- reliability
- flexibility

- fairness
- sufficiency

These principles must be addressed in the:

- design, establishment and management of the assessment system for this Training Package
- development of assessment tools, and
- the conduct of assessment.

Validity

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

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

Reliability

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

Flexibility

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

Fairness

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

Sufficiency

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

Rules of Evidence

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

Valid

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

Sufficient

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

Current

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

Authentic

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

Assessment Requirements of the Australian Quality Training Framework

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

The AQTF 2010 *Essential Standards for Initial and Continuing Registration* can be downloaded from <www.training.com.au>.

The following points summarise the assessment requirements.

Registration of Training Organisations

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

Quality Training and Assessment

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

Assessor Competency Requirements

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

Assessment Requirements

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

Assessment Strategies

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

National Recognition

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

Access and Equity and Client Outcomes

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

Monitoring Assessments

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

Recording Assessment Outcomes

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

Issuing AQF qualifications and Statement of Attainment

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

Licensing/Registration Requirements

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

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

Contact the relevant State or Territory Department(s) to check if the licensing/registration requirements described below still apply, and to check if there are any others with which you must comply. For further information contact <http://www.forestworks.com.au>.

Jurisdiction: Australian Capital Territory

License/ Registration	Website Details
Boom-type elevating work platform (boom length 11m or more)	ACT Office of Regulatory Services www.ors.act.gov.au
Forklift truck	
Front End Loader	
Front End Loader/Backhoe	
Front End Loader (Skid Steer type)	
Excavator	

Pest Management Technician Fumigator	WorkCover New South Wales www.workcover.nsw.gov.au (ACT operators are licensed via this NSW department)
Jurisdiction: New South Wales	
License/ Registration	Website Details
Boom-type elevating work platform (boom length 11m or more) Forklift truck Front End Loader Front End Loader/Backhoe Front End Loader (Skid Steer type) Excavator Pest Management Technician Fumigator	WorkCover New South Wales www.workcover.nsw.gov.au
Shot Firer	Department of Mineral Resources www.minerals.nsw.gov.au
Forest Operator Licence: <ul style="list-style-type: none"> • Chainsaw Operator • Manual Tree Faller • Machine Operator • Truck Driver • Log Grader/Segregator • Harvesting Supervisor • Other Operator (Mechanic) 	State Forests of NSW Forest Operator Licence information can be obtained by contacting your local NSW Department of Primary Industries (DPI) Office. Phone: 1300 655 687 See: http://www.dpi.nsw.gov.au/aboutus/about/office

Jurisdiction: Northern Territory

License/ Registration	Website Details
Industrial truck (forklift) operation Shot firer	NT WorkSafe www.worksafe.nt.gov.au

Jurisdiction: Northern Territory	
Pest Control Operator Provisional Pest Control Operator	Northern Territory Department of Health and Community Services www.nt.gov.au/health
Jurisdiction: Queensland	
License/ Registration	Website Details
Operator of a boom type elevating work platform with a boom length of 11m or more Operator of a dozer Operator of an excavator (engine capacity of more than 2L) Operator of a fork lift truck (other than pedestrian operated) Operator of a front end loader (engine capacity of more than 2L) Operator of a front end loader/backhoe (engine capacity of more than 2L) Operator of a grader Operator of a roller (engine capacity of more than 2L) Operator of a skid steer loader (engine capacity of more than 2L) Operator of a scraper	Workplace Health and Safety NT www.deir.qld.gov.au
Shot Firer	Department of Mines and Energy www.dme.qld.gov.au/mines
Pest Management Technician	Queensland Health www.health.qld.gov.au
Jurisdiction: South Australia	
License/ Registration	Website Details
Forklift truck Front End Loader Front End Loader/Backhoe Front End Loader (Skid Steer type)	South Australia Workcover Corporation www.workcover.com

Jurisdiction: Northern Territory	
Excavator	
Dozer	
Blaster	SafeWork SA www.safework.sa.gov.au
Pest Controller Pest Management Technician	Environment Protection Authority www.epa.sa.gov.au
Jurisdiction: Tasmania	
License/ Registration	Website Details
Boom-type elevating work platform (boom length 11m or more) Forklift truck	Workplace Standards Tasmania www.wst.tas.gov.au
Forest Operator Licence: <ul style="list-style-type: none"> • Dozer • Traxcavator • Skidder • Excavator • Fulghum Log Handler • Loader Operator • Log grader/Segregator • Chainsaw Operator • Mechanical Harvesting • Cable Logging 	ForestWorks Tasmania Phone: (03) 6331 6077 See: http://www.forestworks.com.au/topics/7190.html
Pest Management Technician	Department of Primary Industries, Water and Environment www.dpiwe.tas.gov.au
Jurisdiction: Victoria	
License/ Registration	Website Details
Boom-type elevating work platform (boom length 11m or more) Forklift truck Front End Loader Front End Loader/Backhoe	WorkSafe Victoria www.worksafe.vic.gov.au

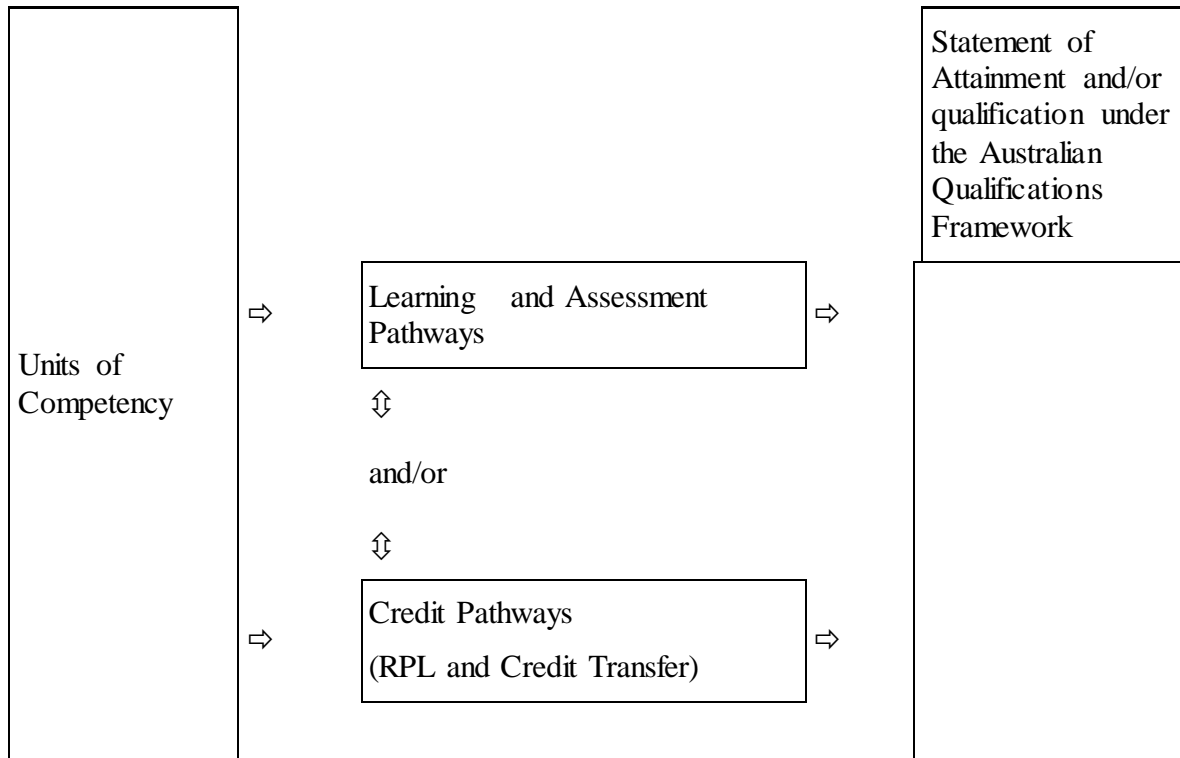
Jurisdiction: Northern Territory	
Front End Loader (Skid Steer type) Excavator	
Blasting explosives	Department of Primary Industries www.dpi.vic.gov.au
Timber Harvesting Operator's Licence: <ul style="list-style-type: none"> Chainsaw Operator Faller Machine Operator Truck Driver Tree Climber 	Department of Sustainability and Environment Phone: 136 186 See: http://www.dse.vic.gov.au/forests/publications/forest-information-sheets/forest-operators-licence
Pest Management Technician Pest Management Trainee	Department of Human Services www.dhs.vic.gov.au
Jurisdiction: Western Australia	
License/ Registration	Website Details
Forklift operation (optional) Boom-type elevating work platform (boom length 11m or more)	Department of Consumer and Employment Protection (Worksafe) www.safetyline.wa.gov.au
Shot Firer	Department of Commerce www.commerce.wa.gov.au
Pest Management Technician Fumigator	Department of Health www.health.wa.gov.au

Pathways

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

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

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



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

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

Learning and Assessment Pathways

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

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

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

Credit Pathways

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

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

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

Recognition of Prior Learning

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

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

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

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

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

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

- questioning (oral or written)

- consideration of a portfolio and review of contents
- consideration of third party reports and/or other documentation such as documentation such as articles, reports, project material, papers, testimonials or other products prepared by the RPL applicant that relate to the learning outcomes of the relevant qualification component
- mapping of learning outcomes from prior formal or non-formal learning to the relevant qualification components
- observation of performance, and
- participation in structured assessment activities the individual would normally be required to undertake if they were enrolled in the qualification component/s.

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

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

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

Credit Transfer

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

This process involves education institutions:

- mapping, comparing and evaluating the extent to which the defined *learning outcomes and assessment requirements* of the individual *components of one qualification* are equivalent to the learning outcomes and assessment requirements of the individual components of another qualification
- making an educational judgment of the credit outcomes to be assigned between the matched components of the two qualifications
- setting out the agreed credit outcomes in a documented arrangement or agreement, and

- publicising the arrangement/agreement and credit available.

Combination of Pathways

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

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

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

Assessor Requirements

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

Assessor Competencies

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

- 1.4 Training and assessment are conducted by trainers and assessors who:
- a) have the necessary training and assessment competencies as determined by the National Quality Council or its successors, and
 - b) have the relevant vocational competencies at least to the level being delivered or assessed, and
 - c) can demonstrate current industry skills directly relevant to the training/assessment being undertaken, and
 - d) continue to develop their Vocational Education and Training (VET) knowledge and skills as well as their industry currency and trainer/assessor competence.

* See AQTF 2010 *Users' Guide to the Essential Standards for Registration* – Appendix 2

Designing Assessment Tools

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

Use of Assessment Tools

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

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

Using Prepared Assessment Tools

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

Developing Assessment Tools

When developing their own assessment tools, assessors must ensure that the tools:

- are benchmarked against the relevant unit or units of competency;
- are reviewed as part of the validation of assessment strategies required under the AQTF; and
- meet the assessment requirements expressed in the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

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

Language, Literacy and Numeracy

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

Conducting Assessment

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

Mandatory Assessment Requirements

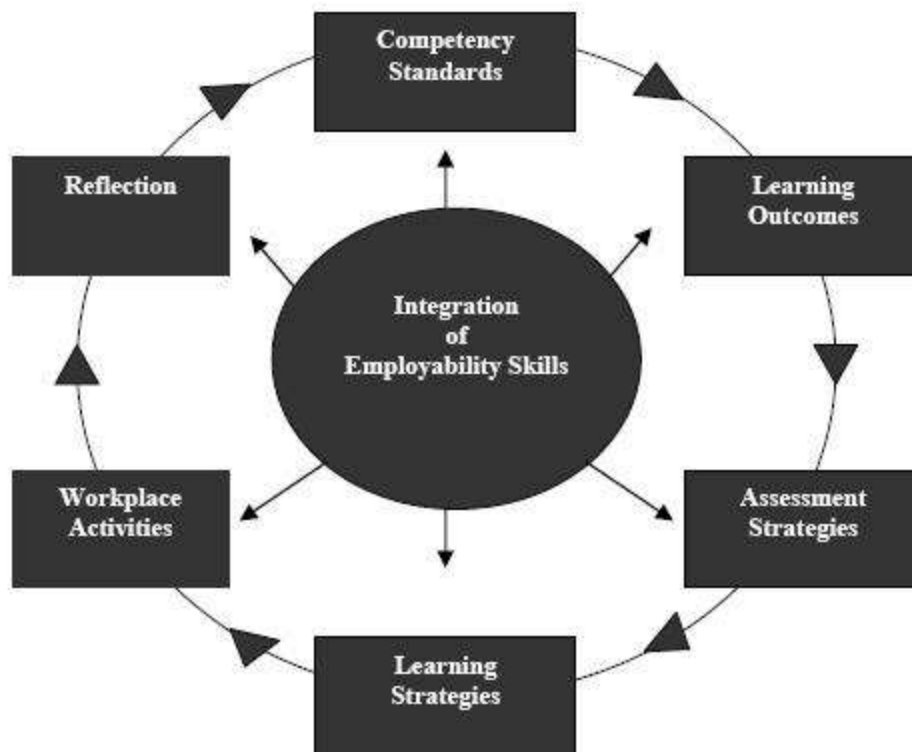
Assessments must meet the criteria set out in the AQTF 2010 *Essential Standards for Initial and Continuing Registration*. For information, the mandatory assessment requirements from Standard 1 from the AQTF 2010 *Essential Standards for Initial and Continuing Registration* are as follows:

1.5 Assessment, including Recognition of Prior Learning (RPL):

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

Assessment of Employability Skills

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



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

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

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

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

For more information on Employability Skills in

Forest and Forest Product Training Packages go to the ForestWorks ISC website at www.forestworks.com.au <http://www..>

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

Access and Equity

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

Under the rules for their development, Training Packages must reflect and cater for the increasing diversity of Australia's VET clients and Australia's current and future workforce. The flexibilities offered by Training Packages should enhance opportunities and potential outcomes for all people so that we can all benefit from a wider national skills base and a shared contribution to Australia's economic development and social and cultural life.

Reasonable Adjustments

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

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

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

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

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

Further Sources of Information

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

Contacts

Industry Skills Council www.forestworks.com.au <http://www.forestworks.com.au>

Technical and Vocational Education and Training (TVET) Australia Limited
Level 21, 390 St Kilda Road, Melbourne
VIC 3150
PO Box 12211, A’Beckett Street Post Office,
Melbourne, Victoria, 8006
Ph: +61 3 9832 8100
Fax: +61 3 9832 8198
Email: sales@tvetaustralia.com.au
Web: www.tvetaustralia.com.au

For information on the TAE10 Training and Education Training Package contact:

Innovation & Business Skills Australia

Telephone: (03) 9815 7000

Facsimile: (03) 9815 7001

Email: virtual@ibsa.org.au

Web: www.ibsa.org.au

General Resources

AQF Implementation Handbook, Fourth Edition 2007. Australian Qualifications Framework Advisory Board, 2002 <www.aqf.edu.au>

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

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

The National Register is an electronic database providing comprehensive information about RTOs, Training Packages and accredited courses - <www.ntis.gov.au>

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

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

Assessment Resources

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

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

Resources can be purchased or accessed from:

- TVET Australia – provides an integrated service to enable users of the national training system to identify and acquire training materials, identify copyright requirements and enter licenses for use of that material consistent with the scope and direction of the NQC.

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

ForestWorks Ltd

PO Box 612

NORTH MELBOURNE VICTORIA 3051

Ph: 1800 177 001 or +61 3 9321 3500

Fax: +61 3 9326 7800

Email: forestworks@forestworks.com.au <http://www.forestworks.com.au>

Web: www.forestworks.com.au <http://www.>

Competency Standards

Competency Standards - Industry Contextualisation

FPI10111 Certificate I in Forest and Forest Products

Modification History

Release 2

Imported unit updated to current release:

- PUATEA001B

Description

This qualification is designed for job roles in the forest and forest products industry.

Pathways Information

This qualification has two employment pathways for operational environments in the forest and forest products industry.

- Arboriculture Worker
- Forestry Worker

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
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EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Communication	<ul style="list-style-type: none"> • Gather, receive and respond to verbal and written instructions with correct actions • Respond to work signage with correct action • Use appropriate communication and interpersonal techniques with colleagues and others • Use questions to gain additional information and to clarify understanding
Teamwork	<ul style="list-style-type: none"> • Participate in simple meeting processes • Provide assistance to and seek assistance from co-workers to achieve work tasks • Seek first aid assistance from others in a timely manner • Share relevant workplace information with co-workers to achieve designated individual and team goals and objectives
Problem-solving	<ul style="list-style-type: none"> • Effectively solve routine problems • Follow safe workplace procedures and safe work instructions for controlling risks • Follow up instances of unclear visual communications to avoid repeated problems • Identify problems and equipment faults and demonstrate appropriate response procedures
Initiative and enterprise	<ul style="list-style-type: none"> • Actively seek feedback on performance from appropriate personnel to confirm quality of performance and identify areas for improvement • Identify and clarify contradictions, ambiguity, uncertainty or misunderstandings with appropriate personnel • Promptly review and report to appropriate personnel, factors affecting the achievement of work tasks • Seek opportunities to improve environmental care practices
Planning and organising	<ul style="list-style-type: none"> • Accurately locate, record and report workplace information • Identify and comply with legal and procedural requirements • Identify environmental care requirements • Identify, prioritise and complete work tasks, within designated timeframes in accordance with work order
Self-management	<ul style="list-style-type: none"> • Apply, follow and adhere to quality system procedures to personal work • Identify and comply with applicable occupational health and safety, legislative and organisational requirements relevant to communicating and interacting with others • Maintain work relationships • Seek appropriate support to assist and improve own performance to achieve personal and organisational goals and objectives

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Learning	<ul style="list-style-type: none"> • Establish opportunities for professional development in consultation with appropriate personnel in accordance with organisational procedures • Practise and carry out emergency and evacuation procedures in the event of an emergency • Record and report information regarding learning and competency development in accordance with organisational requirements
Technology	<ul style="list-style-type: none"> • Select equipment appropriate to work task requirements and use in accordance with manufacturer's recommendations, which includes equipment necessary to complete work tasks, and may include telephones or communications equipment, tools, machinery, vehicles, navigational aids, instruments, computers and computer software, printers, facsimile machines and photocopiers

Packaging Rules

Total number of units = 7

- 5 core units plus
- 2 elective units recommended for packaging at Certificate I or II level from this or any endorsed Training Package or State/Territory accredited course.

Elective units must be relevant to work undertaken in the forest and forest products sector of the industry

CORE UNITS

Field	Unit Code	Unit Name
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2205B	Follow OHS policies and procedures

	FPICOR2207B	Maintain quality and product care
ELECTIVE UNITS	FPIFGM2201B	Collect seed
	AHCILM201A	Maintain cultural places
	PUATEA001B	Work in a team
	FPIFGM2214B	Maintain visitor sites
	BSBINM201A	Process and maintain workplace information
	BSBWOR204A	Use business technology

FPI20111 Certificate II in Forest Growing and Management

Modification History

Release 3

Mapping of FPI20111 updated to reflect change of usage recommendation to Current.

One new unit added to elective bank: FPICOT3263

Elective unit PUAFIR215 replaces PUAFIR201B – Equivalent

Release 2

Imported units updated to current releases.

Release 1

Qualification code updated to FPI20111 in FPI11 Version 1.

The following units added to the qualification as electives:

- AHCCHM304A Transport, handle and store chemicals
- FPICOT2236 Fall trees manually (basic)
- FPICOT3259 Operate a four-wheel drive on unsealed roads

Description

This qualification is designed for job roles in the forest growing and management sector of the forest and forest products industry.

Pathways Information

This qualification has seven employment pathways for typical operational environments of forest growing and management. These are:

- Arboriculture Worker
- Farm Forestry Worker
- Forestry Worker
- Nursery Worker
- Plantation Establishment Worker
- Plantation Forest Officer
- Silviculturalist

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Clarify legal and procedural requirements with appropriate personnel, to ensure consistency of interpretation and application Communicate and work safely with others in the work area Identify and comply with safety signs and symbols Notify appropriate personnel and complete an incident report
Teamwork	<ul style="list-style-type: none"> Receive and action feedback Make constructive contributions to the group Provide assistance to and seek assistance from co-workers to achieve work tasks Share relevant workplace information with co-workers to achieve designated individual and team goals and objectives
Problem-solving	<ul style="list-style-type: none"> Solve routine problems Eliminate or reduce and report fire risks and hazards according to workplace procedures Follow up instances of unclear visual communications to avoid repeated problems Minimise immediate risk to self, as well as the health and safety of others, by controlling hazards according to

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	occupational health and safety requirements
Initiative and enterprise	<ul style="list-style-type: none"> • Check own role and responsibilities with appropriate personnel according to organisational requirements • Note and communicate goals or outcomes to appropriate personnel • Recognise signs of fire and raise alarm at appropriate time according to workplace procedures • Suggest improvements to workplace practices and resource efficiency to relevant personnel
Planning and organising	<ul style="list-style-type: none"> • Locate, record and report workplace information • Comply with applicable legislative and procedural requirements in an ethical manner consistent with workplace standards • Maintain quality and product care according to environmental legislation and workplace procedures • Gather, convey and receive information
Self-management	<ul style="list-style-type: none"> • Apply, follow and adhere to quality system procedures in personal work • Identify and comply with applicable occupational health and safety, legislative and organisational requirements relevant to communicating and interacting with others • Maintain work relationships • Follow environmental care procedures according to organisational requirements
Learning	<ul style="list-style-type: none"> • Identify and establish opportunities for professional development in consultation with appropriate personnel and according to organisational procedures • Record and report information regarding learning and competency development according to organisational requirements
Technology	<ul style="list-style-type: none"> • Request appropriate medical assistance using relevant communication media and equipment, which may include mobile phone, satellite phone, HF or VHF radio, flags, flares, two-way radio, email and electronic equipment

Packaging Rules

Total number of units = 13

- 6 core units plus
- 7 elective units, consisting of:

- 3 units from Group A
- up to 4 units from Group A and/or Group B
- up to 2 units recommended for packaging at Certificate I, II or III level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the forest growing and management sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2204B	Follow fire prevention procedures
	FPICOR2205B	Follow OHS policies and procedures
	FPICOR2207B	Maintain quality and product care
	HLTFA301C	Apply first aid

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Fire Control	AHCWRK201A	Observe and report on weather
	PUAEQU001B	Prepare, maintain and test response equipment
	PUAFIR215	Prevent injury
	PUAFIR204B	Respond to wildfire (unit has PUAFIR201B Prevent injury as a prerequisite)
	PUALAW001B	Protect and preserve incident scene
	PUAOPE002B	Operate communications systems and equipment
	PUATEA001B	Work in a team

Harvesting Operations	AHCARB204A	Undertake standard climbing techniques
	AHCARB206A	Undertake stump removal
	FPICOT2220B	Select trees for tending operations
	FPICOT2236	Fall trees manually (basic)
	FPIHAR2203B	Hook up felled logs using cables (choker)
	FPIHAR2204B	Perform landing duties (chaser)
	FPIHAR2205B	Conduct mobile splitting operations
	FPIHAR2206B	Operate a mobile chipper/mulcher
	FPIHAR2207A	Trim and cut harvested trees
Grading & Testing	FPICOT2223B	Segregate and sort logs

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Warehousing and Distribution	FPICOT2228B	Store materials
	TLID3033A	Operate a vehicle-mounted loading crane
Machinery and Equipment	FPICOT2237A	Maintain chainsaws
	TLIC2002A	Drive light rigid vehicle
	TLIC3003A	Drive medium rigid vehicle
Load Handling	TLID2004A	Load and unload goods/cargo
	TLID2010A	Operate a forklift
	TLILIC2001A	Licence to operate a forklift truck

**Safety and
Quality Processes**

AHCILM201A	Maintain cultural places
AHCWRK203A	Operate in isolated and remote situations
FPICOT2233B	Navigate in forest areas
FPICOT3263	Maintain and contribute to energy efficiency
RIOHS205A	Control traffic with stop-slow bat

**Administration
and Business**

BSBINM201A	Process and maintain workplace information
BSBITU201A	Produce simple word processed documents
BSBWOR204A	Use business technology

FPI20113 Certificate II in Forest Growing and Management

Modification History

Release 2

Mapping to FPI20111 removed.

Release 1

Qualification released as FPI20113 in FPI11 Version 2.

Core unit HLTF311A replaces HLTF301C – Not equivalent

One new unit added to elective bank: FPICOT3263

Elective unit PUAFIR215 replaces PUAFIR201B – Equivalent

Imported units updated to current release:

- AHCNSY203A
- LGAWORK212A
- PUAFIR204B
- PUAFIR209B
- PUALAW001B
- PUATEA001B

Description

This qualification is designed for job roles in the forest growing and management sector of the forest and forest products industry.

Pathways Information

This qualification has seven employment pathways for typical operational environments of forest growing and management. These are:

- Arboriculture Worker
- Farm Forestry Worker
- Forestry Worker
- Nursery Worker
- Plantation Establishment Worker
- Plantation Forest Officer
- Silviculturalist

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
<p>The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.</p>	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Clarify legal and procedural requirements with appropriate personnel, to ensure consistency of interpretation and application Communicate and work safely with others in the work area Identify and comply with safety signs and symbols Notify appropriate personnel and complete an incident report
Teamwork	<ul style="list-style-type: none"> Receive and action feedback Make constructive contributions to the group Provide assistance to and seek assistance from co-workers to achieve work tasks Share relevant workplace information with co-workers to achieve designated individual and team goals and objectives
Problem-solving	<ul style="list-style-type: none"> Solve routine problems Eliminate or reduce and report fire risks and hazards according to workplace procedures Follow up instances of unclear visual communications to avoid repeated problems Minimise immediate risk to self, as well as the health and safety of others, by controlling hazards according to

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	occupational health and safety requirements
Initiative and enterprise	<ul style="list-style-type: none"> • Check own role and responsibilities with appropriate personnel according to organisational requirements • Note and communicate goals or outcomes to appropriate personnel • Recognise signs of fire and raise alarm at appropriate time according to workplace procedures • Suggest improvements to workplace practices and resource efficiency to relevant personnel
Planning and organising	<ul style="list-style-type: none"> • Locate, record and report workplace information • Comply with applicable legislative and procedural requirements in an ethical manner consistent with workplace standards • Maintain quality and product care according to environmental legislation and workplace procedures • Gather, convey and receive information
Self-management	<ul style="list-style-type: none"> • Apply, follow and adhere to quality system procedures in personal work • Identify and comply with applicable occupational health and safety, legislative and organisational requirements relevant to communicating and interacting with others • Maintain work relationships • Follow environmental care procedures according to organisational requirements
Learning	<ul style="list-style-type: none"> • Identify and establish opportunities for professional development in consultation with appropriate personnel and according to organisational procedures • Record and report information regarding learning and competency development according to organisational requirements
Technology	<ul style="list-style-type: none"> • Request appropriate medical assistance using relevant communication media and equipment, which may include mobile phone, satellite phone, HF or VHF radio, flags, flares, two-way radio, email and electronic equipment

Packaging Rules

Total number of units = 13

- 6 core units plus
- 7 elective units, consisting of:

- 3 units from Group A
- up to 4 units from Group A and/or Group B
- up to 2 units recommended for packaging at Certificate I, II or III level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the forest growing and management sector of the industry.

Field	Unit Code	Unit Title
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2204B	Follow fire prevention procedures
	FPICOR2205B	Follow OHS policies and procedures
	HLTFA311A	Apply first aid

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Fire Control	AHCFIR201A	Assist with prescribed burning
	AHCWRK201A	Observe and report on weather
	FPIFGM2211B	Detect fires
	PUAEQU001B	Prepare, maintain and test response equipment
	PUAFIR215	Prevent injury
	PUAFIR204B	Respond to wildfire (unit has PUAFIR201B Prevent injury as a prerequisite)
	PUAFIR209B	Work safely around aircraft
	PUALAW001B	Protect and preserve incident scene
	PUAOPE002B	Operate communications systems and equipment

	PUATEA001B	Work in a team
Site Establishment and Maintenance	AHCILM201A	Maintain cultural places
	AHCINF202A	Install, maintain and repair fencing
	AHCINF203A	Maintain properties and structures
	AHCIRG204A	Lay irrigation and/or drainage pipes
	AHCIRG206A	Maintain pressurised irrigation systems
	AHCPMG201A	Treat weeds
	AHCSAW201A	Conduct erosion and sediment control activities
	FPIFGM2207B	Undertake brushcutting operations
	FPIFGM2210B	Implement animal pest control procedures
	FPIFGM2214B	Maintain visitor sites
	LGAWORK212A	Perform field support duties in a roadwork environment
Breeding and Propagation	AHCNSY201A	Pot up plants
	AHCNSY203A	Undertake propagation activities
	FPIFGM2201B	Collect seed
	FPIFGM2202B	Prepare seedbed
	FPIFGM2209B	Cut, sort and set cuttings
	FPIFGM2212B	Graft cuttings
	FPIFGM2213B	Process seed
Tree Growing and Maintenance	AHCARB204A	Undertake standard climbing techniques
	AHCARB206A	Undertake stump removal
	AHCPMG202A	Treat plant pests, diseases and disorders

AHCNSY202A	Tend nursery plants
FPICOT2236	Fall trees manually (basic)
FPICOR2207B	Maintain quality and product care
FPICOT2220B	Select trees for tending operations
FPICOT2239A	Trim and cut felled trees
FPIFGM2203B	Plant trees by hand
FPIFGM2204B	Plant trees mechanically
FPIFGM2205B	Prune trees
FPIFGM2206B	Collect data or samples for assessment

Grading and Testing	FPIFGM2215B	Measure trees
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GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Warehousing and Distribution	AHCNSY302A	Receive and dispatch nursery products
	FPICOT2228B	Store materials
Machinery and Equipment	TLID3033A	Operate a vehicle-mounted loading crane
	FPICOT2237A	Maintain chainsaws
	FPICOT3259	Operate a four-wheel drive on unsealed roads
	TLIC2002A	Drive light rigid vehicle
	TLIC3003A	Drive medium rigid vehicle
Load Handling	AHCCHM304A	Transport, handle and store chemicals
	TLID2004A	Load and unload goods/cargo

	TLID2010A	Operate a forklift
	TLID2012A	Operate specialised load shifting equipment
	TLILIC2001A	Licence to operate a forklift truck
Safety and Quality Processes	AHCCHM201A	Apply chemicals under supervision
	AHCWRK203A	Operate in isolated and remote situations
	FPICOT2233B	Navigate in forest areas
	RIOHS205A	Control traffic with stop-slow bat
	FPICOT3263	Maintain and contribute to energy efficiency
Administration and Business	BSBINM201A	Process and maintain workplace information
	BSBITU201A	Produce simple word processed documents
	BSBWOR204A	Use business technology

FPI20211 Certificate II in Harvesting and Haulage

Modification History

Release 3

Mapping of FPI20211 updated to reflect change of usage recommendation to Current.

One new unit added to elective bank: FPICOT3263

Elective unit PUAFIR215 replaces PUAFIR201B – Equivalent

Release 2

Imported units updated to current releases.

TLID3033A replaces AHCMOM202A - due to a typographical error, AHCMOM202A was incorrectly included in this qualification. As per the Case for Endorsement, this error has now been corrected.

Release 1

Qualification code updated to FPI20211 in FPI11 Version 1.

The following units have been added to the qualification as electives:

- AHCCHM304A Transport, handle and store chemicals
- FPICOT2236 Fall trees manually (basic)
- FPICOT3259 Operate a four-wheel drive on unsealed roads

Description

This qualification is designed for job roles in the harvest and haulage sector of the forest and forest products industry.

Pathways Information

This qualification has ten employment pathways for typical operational environments of harvesting and haulage. These are:

- Bulldozer Operator
- Chainsaw Operator
- Excavator Operator
- Forest Harvester
- Forwarder Operator
- Grader
- Harvesting Technician

- Mobile Equipment Operator
- Rigging Slinger
- Skidder Operator

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Communicate details of an incident • Identify and comply with safety signs and symbols • Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> • Make constructive contributions to the group • Notify appropriate personnel in the event of an emergency • Report breaches or potential breaches of relevant environmental regulations to relevant personnel • Share relevant workplace information with co-workers to achieve designated individual and team goals and objectives

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Problem-solving	<ul style="list-style-type: none"> Identify and report occupational health and safety issues and risks in the work area to appropriate personnel Identify problems and equipment faults and demonstrate appropriate response procedures Identify and promptly report problems to appropriate personnel to avoid repetition of de-valued product
Initiative and enterprise	<ul style="list-style-type: none"> Demonstrate effective response procedures to workplace risks, hazards and emergencies Note and communicate goals and outcomes to appropriate personnel Recognise signs of fire and raise alarm at appropriate time according to workplace procedures Suggest improvements to workplace practices and resource efficiency to relevant personnel
Planning and organising	<ul style="list-style-type: none"> Locate, record and report information Identify and comply with safety signs and symbols Access and apply workplace safety procedures Maintain quality and product care according to environmental legislation and workplace procedures Follow safe workplace procedures for dealing with accidents and emergencies within scope of responsibilities
Self-management	<ul style="list-style-type: none"> Follow and apply quality system procedures in personal work Maintain work relationships Follow environmental care procedures according to organisational requirements Seek appropriate support to assist and improve own performance to achieve personal and organisational goals and objectives
Learning	<ul style="list-style-type: none"> Identify and establish opportunities for professional development in consultation with appropriate personnel according to organisational procedures Practise and carry out emergency and evacuation procedures in the event of an emergency Record and report information regarding learning and competency development according to organisational requirements
Technology	<ul style="list-style-type: none"> Select equipment appropriate to work task requirements and use according to manufacturer's recommendations, which may include telephones and other communications equipment, tools, machinery, vehicles, navigational aids, instruments, computers and computer software, printers,

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	facsimile machines and photocopiers

Packaging Rules

Total number of units = 13

- 7 core units plus
- 6 elective units, consisting of:
 - 2 units from Group A
 - up to 4 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate I, II or III level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the forest growing and management sector of the industry.

CORE UNITS

Field	Unit Code	Unit Name
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2204B	Follow fire prevention procedures
	FPICOR2205B	Follow OHS policies and procedures
	FPICOR2207B	Maintain quality and product care
	HLTFA301C	Apply first aid

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Name
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Fire Control	AHCWRK201A	Observe and report on weather
	PUAEQU001B	Prepare, maintain and test response equipment
	PUAFIR201B	Prevent injury
	PUAFIR204B	Respond to wildfire (unit has PUAFIR201B Prevent injury as a prerequisite)
	PUALAW001B	Protect and preserve incident scene
	PUAOPE002B	Operate communications systems and equipment
	PUATEA001B	Work in a team
Harvesting Operations	AHCARB204A	Undertake standard climbing techniques
	AHCARB206A	Undertake stump removal
	FPICOT2220B	Select trees for tending operations
	FPICOT2236	Fall trees manually (basic)
	FPIHAR2203B	Hook up felled logs using cables (choker)
	FPIHAR2204B	Perform landing duties (chaser)
	FPIHAR2205B	Conduct mobile splitting operations
	FPIHAR2206B	Operate a mobile chipper/mulcher
	FPIHAR2207A	Trim and cut harvested trees
Grading & Testing	FPICOT2223B	Segregate and sort logs

GROUP B ELECTIVE UNITS

Field	Unit Code	
Warehousing and Distribution	FPICOT2228B	Store materials
	TLID3033A	Operate a vehicle-mounted loading crane

Machinery and Equipment	FPICOT2237A	Maintain chainsaws
	TLIC2002A	Drive light rigid vehicle
	TLIC3003A	Drive medium rigid vehicle
Load Handling	TLID2004A	Load and unload goods and cargo
	TLID2010A	Operate a forklift
	TLILIC2001A	Licence to operate a forklift truck
Safety and Quality Processes	AHCILM201A	Maintain cultural places
	AHCWRK203A	Operate in isolated and remote situations
	FPICOT2233B	Navigate in forest areas
	RIIOHS205A	Control traffic with stop-slow bat
Administration and Business	BSBINM201A	Process and maintain workplace information
	BSBITU201A	Produce simple word processed documents
	BSBWOR204A	Use business technology

FPI20213 Certificate II in Harvesting and Haulage

Modification History

Release 2

Mapping to FPI20211 removed.

Release 1

Qualification released as FPI20213 in FPI11 Version 2.

Core unit HLTF A311A replaces HLTF A301C – Not equivalent

One new unit added to elective bank: FPICOT3263

Elective unit PUAFIR215 replaces PUAFIR201B – Equivalent

Imported units to current release:

- PUAFIR204B
- PUALAW001B
- PUATEA0001B

Description

This qualification is designed for job roles in the harvest and haulage sector of the forest and forest products industry.

Pathways Information

This qualification has ten employment pathways for typical operational environments of harvesting and haulage. These are:

- Bulldozer Operator
- Chainsaw Operator
- Excavator Operator
- Forest Harvester
- Forwarder Operator
- Grader
- Harvesting Technician
- Mobile Equipment Operator
- Rigging Slinger
- Skidder Operator

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
<p>The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.</p>	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Communicate details of an incident • Identify and comply with safety signs and symbols • Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> • Make constructive contributions to the group • Notify appropriate personnel in the event of an emergency • Report breaches or potential breaches of relevant environmental regulations to relevant personnel • Share relevant workplace information with co-workers to achieve designated individual and team goals and objectives
Problem-solving	<ul style="list-style-type: none"> • Identify and report occupational health and safety issues and risks in the work area to appropriate personnel • Identify problems and equipment faults and demonstrate appropriate response procedures • Identify and promptly report problems to appropriate personnel to avoid repetition of de-valued product
Initiative and enterprise	<ul style="list-style-type: none"> • Demonstrate effective response procedures to workplace risks, hazards and emergencies • Note and communicate goals and outcomes to appropriate personnel • Recognise signs of fire and raise alarm at appropriate time

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<p>according to workplace procedures</p> <ul style="list-style-type: none"> • Suggest improvements to workplace practices and resource efficiency to relevant personnel
Planning and organising	<ul style="list-style-type: none"> • Locate, record and report information • Identify and comply with safety signs and symbols • Access and apply workplace safety procedures • Maintain quality and product care according to environmental legislation and workplace procedures • Follow safe workplace procedures for dealing with accidents and emergencies within scope of responsibilities
Self-management	<ul style="list-style-type: none"> • Follow and apply quality system procedures in personal work • Maintain work relationships • Follow environmental care procedures according to organisational requirements • Seek appropriate support to assist and improve own performance to achieve personal and organisational goals and objectives
Learning	<ul style="list-style-type: none"> • Identify and establish opportunities for professional development in consultation with appropriate personnel according to organisational procedures • Practise and carry out emergency and evacuation procedures in the event of an emergency • Record and report information regarding learning and competency development according to organisational requirements
Technology	<ul style="list-style-type: none"> • Select equipment appropriate to work task requirements and use according to manufacturer's recommendations, which may include telephones and other communications equipment, tools, machinery, vehicles, navigational aids, instruments, computers and computer software, printers, facsimile machines and photocopiers

Packaging Rules

Total number of units = 13

- 7 core units plus
- 6 elective units, consisting of:
 - 2 units from Group A

- up to 4 units from Group A and/or Group B
- up to 2 units recommended for packaging at Certificate I, II or III level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the forest growing and management sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2204B	Follow fire prevention procedures
	FPICOR2205B	Follow OHS policies and procedures
	FPICOR2207B	Maintain quality and product care
	HLTFA311A	Apply first aid

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Fire Control	AHCWRK201A	Observe and report on weather
	PUAEQU001B	Prepare, maintain and test response equipment
	PUAFIR215	Prevent injury
	PUAFIR204B	Respond to wildfire (unit has PUAFIR215 Prevent injury as a prerequisite)
	PUALAW001B	Protect and preserve incident scene
	PUAOPE002B	Operate communications systems and equipment
	PUATEA001B	Work in a team

Harvesting Operations	AHCARB204A	Undertake standard climbing techniques
	AHCARB206A	Undertake stump removal
	FPICOT2220B	Select trees for tending operations
	FPICOT2236	Fall trees manually (basic)
	FPIHAR2203B	Hook up felled logs using cables (choker)
	FPIHAR2204B	Perform landing duties (chaser)
	FPIHAR2205B	Conduct mobile splitting operations
	FPIHAR2206B	Operate a mobile chipper/mulcher
	FPIHAR2207A	Trim and cut harvested trees
Grading & Testing	FPICOT2223B	Segregate and sort logs

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Warehousing and Distribution	FPICOT2228B	Store materials
	TLID3033A	Operate a vehicle-mounted loading crane
Machinery and Equipment	FPICOT2237A	Maintain chainsaws
	TLIC2002A	Drive light rigid vehicle
	TLIC3003A	Drive medium rigid vehicle
Load Handling	TLID2004A	Load and unload goods/cargo
	TLID2010A	Operate a forklift
	TLILIC2001A	Licence to operate a forklift truck

**Safety and
Quality Processes**

AHCILM201A	Maintain cultural places
AHCWRK203A	Operate in isolated and remote situations
FPICOT2233B	Navigate in forest areas
FPICOT3263	Maintain and contribute to energy efficiency
RIOHS205A	Control traffic with stop-slow bat

**Administration
and Business**

BSBINM201A	Process and maintain workplace information
BSBITU201A	Produce simple word processed documents
BSBWOR204A	Use business technology

FPI20311 Certificate II in Sawmilling and Processing

Modification History

Release 2

Three new units added to elective bank:

- FPICOT2241
- FPICOT3263
- FPICOT3264

Elective unit HLTF311A replaces HLTF301C - Not equivalent

Imported unit updated to current release:

- MEM18011C

Release 1.1

Five imported units of competency updated:

- TLIF1002B replaces TLIF1002A - Equivalent
- TLID2004A replaces TLID407C - Equivalent
- TLID2047A replaces TLID707C - Equivalent
- MSS402001A replaces MSACMS200A - Equivalent
- SIRXCCS202 replaces SIRXCCS002A - Equivalent

Description

This qualification is designed for job roles in the sawmilling and processing sector of the forest and forest products industry.

Pathways Information

This qualification has five employment pathways for typical operational environments of sawmilling and processing. These are:

- Kiln Worker
- Timber Grader
- Treatment Plant Worker
- Production Worker
- Sawmill Worker

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
<p>The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.</p>	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Convey information in simple language, and acknowledge and check message Establish and maintain communication with others according to organisational policies and procedures Identify and comply with safety signs and symbols Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> Check key legal and procedural principles relating to work order with appropriate personnel, according to organisational requirements Make constructive contributions to the group Provide assistance to and seek assistance from co-workers to achieve work tasks Share relevant workplace information with co-workers to achieve designated individual and team goals and objectives
Problem-solving	<ul style="list-style-type: none"> Follow safe workplace procedures and safe work instructions for controlling risks Identify and report occupational health and safety issues and risks in the work area to appropriate personnel

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> Identify problems and equipment faults and demonstrate appropriate response procedures Identify and promptly report problems to appropriate personnel to avoid repetition of de-valued product
Initiative and enterprise	<ul style="list-style-type: none"> Apply safe work practices, including effective response procedures, to workplace risk and emergencies, according to applicable occupational health and safety and organisational requirements Actively seek feedback on performance from appropriate personnel to confirm quality of performance and identify areas for improvement Identify and report existing and potential hazards in the work area to appropriate personnel Review factors affecting the achievement of work tasks and report to appropriate personnel
Planning and organising	<ul style="list-style-type: none"> Locate, record and report workplace information Identify and comply with applicable legislative and procedural requirements in an ethical manner consistent with workplace standards Follow safe workplace procedures for dealing with accidents and emergencies within scope of responsibilities
Self-management	<ul style="list-style-type: none"> Follow and apply quality system procedures in personal work Maintain work relationships Follow environmental care procedures according to organisational requirements Seek appropriate support to assist and improve own performance to achieve personal and organisational goals and objectives
Learning	<ul style="list-style-type: none"> Identify and establish opportunities for professional development in consultation with appropriate personnel according to organisational procedures Practise and carry out emergency and evacuation procedures in the event of an emergency Record and report information regarding learning and competency development according to organisational requirements
Technology	<ul style="list-style-type: none"> Maintain machinery and adjust equipment to minimise product damage and waste Use relevant equipment to complete work tasks within designated timeframes, which may include telephones and other communications equipment, tools, machinery, vehicles, navigational aids, instruments, computers and computer software, printers, facsimile machines and photocopiers

Packaging Rules

Total number of units = 13

- 5 core units plus
- 8 elective units, consisting of:
 - 3 units from Group A
 - up to 5 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate I, II or III level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the Sawmilling and Processing Sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2205B	Follow OHS policies and procedures
	FPICOR2207B	Maintain quality and product care

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Logyard and/or Material Preparation	FPICOT2226B	Debark logs mechanically
	FPICOT3203B	Weigh loads
Sawing Operations	FPICOT2202B	Rack material
	FPICOT2205B	Tail out materials
	FPICOT2208B	Resaw boards and timber
	FPICOT2218B	Cross cut materials with a fixed saw

	FPICOT2229B	Dock material to length
	FPICOT2238A	Cut materials with a hand-held chainsaw
	FPISAW2202B	Sort boards manually
	FPISAW2203B	Sort boards mechanically
	FPISAW2204B	Dock boards with mechanical feed
	FPISAW2207B	Round softwood logs
	FPISAW2208B	Split wood products
	FPISAW2209B	Dismantle, transport and assemble hand portable sawmill
Grading and Testing	FPICOT2212B	Grade hardwood sawn and milled products
	FPICOT2213B	Grade softwood sawn and milled products
	FPICOT2214B	Grade cypress sawn and milled products
	FPICOT2215B	Visually stress grade hardwood
	FPICOT2216B	Visually stress grade softwood
	FPICOT2217B	Visually stress grade cypress
	FPISAW2201B	Grade round poles and debarked logs
Timber Products	FPICOT2203B	Finish products
	FPICOT2207B	Dress boards and timber
	FPICOT2209B	Produce finger jointed timber
	FPICOT2211B	Produce pointed timber products
	FPICOT2222B	Produce laminated beams
	FPICOT2230B	Assemble products
	FPICOT2241	Apply wood and timber product knowledge
	FPISAW2205B	Assemble materials using nail plates
	FPISAW2206B	De-stack seasoning racks
Timber Drying and	AHCCHM201A	Apply chemicals under supervision

Treatment FPISAW2210B Prepare for timber treatment operations

Woodchipping FPICOT2225B Chip or flake wood

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Warehousing and Distribution	FPICOT2201B	Stack and bind material
	FPICOT2210B	Tally material
	FPICOT2227B	Process orders and despatch products
	FPICOT2228B	Store materials
	FPICOT2231B	Pack products
	FPICOT3264	Build and maintain timber stacks
	TLIF1002B	Conduct housekeeping activities
Machinery and Equipment	FPICOT2219B	Use hand-held tools
	FPICOT2237A	Maintain chainsaws
	FPICOT2240	Cut material with a pole saw
	FPICOT3259	Operate a four wheel drive on unsealed roads
	MEM18011C	Shut down and isolate machines/equipment
Load Handling	TLIC2002A	Drive light rigid vehicle
	TLIC3003A	Drive medium rigid vehicle
	TLID2004A	Load and unload goods/cargo
	TLID2047A	Prepare cargo for transfer with slings
	TLID2010A	Operate a forklift
	TLID2012A	Operate specialised load shifting equipment
	TLID2013A	Move materials mechanically using automated equipment
	TLILIC2001A	Licence to operate a forklift truck

Safety & Quality Processes	AHCWRK203A	Operate in isolated and remote situations
	FPICOT2233B	Navigate in forest areas
	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA311A	Apply first aid
Administration & Business	BSBINM201A	Process and maintain workplace information
	BSBITU201A	Produce simple word processed documents
	BSBWOR204A	Use business technology
Competitive Manufacturing	MSS402001A	Apply competitive systems and practices
Communication and Relationships	SIRXCCS202	Interact with customers

FPI20411 Certificate II in Wood Panel Products

Modification History

Release 2

Three new units added to elective bank:

- FPICOT2241
- FPICOT3263
- FPICOT3264

Elective unit HLTF311A replaces HLTF301C – Not equivalent

Imported unit updated to current release:

- MEM18011C

Release 1.1

Three imported units of competency updated:

- TLIF1002B replaces TLIF1002A - Equivalent
- MSS402001A replaces MSACMS200A - Equivalent
- SIRXCCS202 replaces SIRXCCS002A - Equivalent

Description

This qualification is designed for job roles in the wood panel products sector of the forest and forest products industry.

Pathways Information

This qualification has three employment pathways for typical operational environments of wood panel products. These are:

- Production Worker (Laminates)
- Production Worker (Panel and Board)
- Production Worker (Veneer)

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Convey information in simple language, and acknowledge and check message Establish and maintain communication with others according to organisational policies and procedures Identify and comply with safety signs and symbols Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> Check key legal and procedural principles relating to work order with appropriate personnel, according to organisational requirements Make constructive contributions to the group Provide assistance to and seek assistance from co-workers to achieve work tasks Share relevant workplace information with co-workers to achieve designated individual and team goals and objectives
Problem-solving	<ul style="list-style-type: none"> Follow safe workplace procedures and safe work instructions for controlling risks Identify and report occupational health and safety issues and risks in the work area to appropriate personnel Identify problems and equipment faults and demonstrate appropriate response procedures Identify and promptly report problems to appropriate

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	personnel to avoid repetition of de-valued product
Initiative and enterprise	<ul style="list-style-type: none"> Apply safe work practices, including effective response procedures, to workplace risk and emergencies, according to applicable occupational health and safety and organisational requirements Actively seek feedback on performance from appropriate personnel to confirm quality of performance and identify areas for improvement Identify and report existing and potential hazards in the work area to appropriate personnel Review factors affecting the achievement of work tasks and report to appropriate personnel
Planning and organising	<ul style="list-style-type: none"> Locate, record and report workplace information Identify and comply with applicable legislative and procedural requirements in an ethical manner consistent with workplace standards Follow safe workplace procedures for dealing with accidents and emergencies within scope of responsibilities
Self-management	<ul style="list-style-type: none"> Follow and apply quality system procedures in personal work Maintain work relationships Follow environmental care procedures according to organisational requirements Seek appropriate support to assist and improve own performance to achieve personal and organisational goals and objectives
Learning	<ul style="list-style-type: none"> Identify and establish opportunities for professional development in consultation with appropriate personnel according to organisational procedures Practise and carry out emergency and evacuation procedures in the event of an emergency Record and report information regarding learning and competency development according to organisational requirements
Technology	<ul style="list-style-type: none"> Maintain machinery and adjust equipment to minimise product damage and waste Use relevant equipment to complete work tasks within designated timeframes and according to workplace procedures, which may include telephones and other communications equipment, tools, machinery, vehicles, navigational aids, instruments, computers and computer software, printers, facsimile machines and photocopiers

Packaging Rules

Total number of units = 13

- 5 core units plus
- 8 elective units, consisting of:
 - 2 units from Group A
 - up to 6 units from Group A and/or Group B
 - up to 3 units recommended for packaging at Certificate I, II or III level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the wood panel products sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2205B	Follow OHS policies and procedures
	FPICOR2207B	Maintain quality and product care

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Logyard and/or Material Preparation	FPICOT2218B	Cross cut materials with a fixed saw
	FPICOT2226B	Debark logs mechanically
Veneer/Board Production	FPICOT2202B	Rack material
	FPICOT2205B	Tail out materials

	FPICOT2207B	Dress boards and timber
	FPICOT2232B	Cut material to shape using a saw
	FPIWPP2201B	Cut panels
	FPIWPP2202B	Surface treat raw board
	FPIWPP2203B	Repair veneer and ply
	FPIWPP2204B	Repair veneer mechanically
	FPIWPP2206B	Prepare veneer for ply
	FPIWPP2207B	Scarf edges of veneer
	FPIWPP2208B	Cut veneer
	FPIWPP2209B	Saw products from continuous ply
	FPIWPP2210B	Cut panels to profile
Lamination and Finishing	FPICOT2203B	Finish products
	FPICOT2222B	Produce laminated beams
	FPICOT2224B	Band edges of panels
	FPICOT2230B	Assemble products
Grading and Testing	FPICOT2213B	Grade softwood sawn and milled products
	FPICOT2225B	Chip or flake wood
Woodchipping	FPIWPP2205B	Prepare chip or fibre blends

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Warehousing and	FPICOT2201B	Stack and bind material
	FPICOT2210B	Tally material

Distribution	FPICOT2227B	Process orders and despatch products
	FPICOT2228B	Store materials
	FPICOT2231B	Pack products
	FPICOT3264	Build and maintain timber stacks
	TLIF1002B	Conduct housekeeping activities
Load Handling	FPIWPP2211B	Move material by transfer equipment
	TLID2004A	Load and unload goods/cargo
	TLID2010A	Operate a forklift
	TLID2013A	Move materials mechanically using automated equipment
	TLID2047A	Prepare cargo for transfer with slings
	TLILIC2001A	Licence to operate a forklift truck
Machinery and Equipment	FPICOT2219B	Use hand-held tools
	FPICOT2237A	Maintain chainsaws
	FPICOT2240	Cut material with a pole saw
	MEM18011C	Shut down and isolate machines/equipment
Safety and Quality Processes	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA311A	Apply first aid
Administration and Business	BSBINM201A	Process and maintain workplace information
	BSBITU201A	Produce simple word processed documents
	BSBWOR204A	Use business technology

**Competitive
Manufacturing** MSS402001A Apply competitive systems and practices

**Communication
and
Relationships** FPICOT2241 Apply wood and timber product knowledge
 SIRXCCS202 Interact with customers

FPI20511 Certificate II in Timber Manufactured Products

Modification History

Release 2

Three new units added to elective bank:

- FPICOT2241
- FPICOT3263
- FPICOT3264

Elective unit HLTF311A replaces HLTF301C – Not equivalent

Release 1.1

Two Imported units of competency updated:

- LMFGG2008C replaces LMFGG2008B - Equivalent
- MSS402001A replaces MSACMS200A - Equivalent

Description

This qualification is designed for job roles in the forest and forest products industry.

Pathways Information

This qualification has six employment pathways for operational environments in the forest and forest products industry. These are:

- Grader
- Manufacturing Assistant (Timber Products)
- Saw Operator
- Timber Manufacturing Worker
- Timber Products Worker
- Timber Puller

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
<p>The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.</p>	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Convey information in simple language, and acknowledge and check message Establish and maintain communication with others in accordance with organisational policies and procedures Identify and comply with safety signs and symbols Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> Check key legal and procedural principles relating to work order with appropriate personnel, in accordance with organisational requirements Make constructive contributions to the group Provide assistance to and seek assistance from co-workers to achieve work tasks Share relevant workplace information with co-workers to achieve designated individual and team goals and objectives
Problem-solving	<ul style="list-style-type: none"> Follow safe workplace procedures and safe work instructions for controlling risks Identify and report occupational health and safety issues and risks in the work area to appropriate personnel Identify problems and equipment faults and demonstrate appropriate response procedures Immediately identify and promptly report problems to appropriate personnel to avoid repetition of de-valued product
Initiative and enterprise	<ul style="list-style-type: none"> Apply safe work practices, including effective response procedures, to workplace risk and emergencies, according to

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<p>applicable occupational health and safety and organisational requirements</p> <ul style="list-style-type: none"> Actively seek feedback on performance from appropriate personnel to confirm quality of performance and identify areas for improvement Identify and report existing and potential hazards in the work area to appropriate personnel Promptly review factors affecting the achievement of work tasks and report to appropriate personnel
Planning and organising	<ul style="list-style-type: none"> Accurately locate, record and report workplace information Conduct ethically and to required standards, procedures to ensure compliance with applicable legislative and procedural requirements Follow safe workplace procedures for dealing with accidents and emergencies within scope of responsibilities Identify and comply with legal and procedural requirements
Self-management	<ul style="list-style-type: none"> Apply, follow and adhere to quality system procedures to personal work Maintain work relationships Safely and efficiently follow environmental care procedures according to organisational requirements Seek appropriate support to assist and improve own performance to achieve personal and organisational goals and objectives
Learning	<ul style="list-style-type: none"> Establish opportunities for professional development in consultation with appropriate personnel in accordance with organisational procedures Identify opportunities for professional development Practise and carry out emergency and evacuation procedures in the event of an emergency Record and report information regarding learning and competency development in accordance with organisational requirements
Technology	<ul style="list-style-type: none"> Regularly maintain machinery and adjust equipment to minimise product damage and waste Safely and efficiently use relevant equipment to complete work tasks within designated timeframes - equipment may include equipment necessary to complete work tasks, and may include telephones or communications equipment, tools, machinery, vehicles, navigational aids, instruments, computers and computer software, printers, facsimile machines and photocopiers

Packaging Rules

Total number of units = 13

- 5 core units plus
- 8 elective units, consisting of:
 - 3 units from Group A
 - up to 5 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate I, II or III level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the timber manufactured products sector of the industry

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2205B	Follow OHS policies and procedures
	FPICOR2207B	Maintain quality and product care

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Sawing Operations	FPICOT2205B	Tail out materials
	FPICOT2208B	Resaw boards and timber
	FPICOT2229B	Dock material to length
	FPICOT2232B	Cut material to shape using a saw
	FPITMM2201B	Cut material to length and angles

	FPITMM2202B	Machine material
Timber Grading & Testing	FPICOT2212B	Grade hardwood sawn and milled products
	FPICOT2213B	Grade softwood sawn and milled products
	FPICOT2214B	Grade cypress sawn and milled products
	FPICOT2215B	Visually stress grade hardwood
	FPICOT2216B	Visually stress grade softwood
	FPICOT2217B	Visually stress grade cypress
Timber Products	FPICOT2203B	Finish products
	FPICOT2207B	Dress boards and timber
	FPICOT2209B	Produce finger jointed timber
	FPICOT2211B	Produce pointed timber products
	FPICOT2222B	Produce laminated beams
	FPICOT2224B	Band edges of panels
	FPICOT2230B	Assemble products
	FPICOT2241	Apply wood and timber product knowledge
	FPISAW2205B	Assemble materials using nail plates
	FPIWPP2203B	Repair veneer and ply
	FPIWPP2204B	Repair veneer mechanically
	LMFGG2008C	Glaze reglaze residential windows and doors

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Machinery & Equipment	FPICOT2219B	Use hand-held tools
	FPICOT2240	Cut materials with a pole saw

	FPICOT3259	Operate a four wheel drive on unsealed roads
	TLIC2002A	Drive light rigid vehicle
	TLIC3003A	Drive medium rigid vehicle
Warehousing & Distribution	FPICOT2210B	Tally material
	FPICOT2227B	Process orders and despatch products
	FPICOT2228B	Store materials
	FPICOT2231B	Pack products
	FPICOT3264	Build and maintain timber stacks
Load Handling	TLID2004A	Load and unload goods/cargo
	TLID2010A	Operate a forklift
	TLID2012A	Operate specialised load shifting equipment
	TLILIC2001A	Licence to operate a forklift truck
Safety & Quality Processes	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA311A	Apply first aid
Competitive Manufacturing	MSS402001A	Apply competitive systems and practices
Administration & Business	BSBINM201A	Process and maintain workplace information
	BSBITU201A	Produce simple word processed documents
	BSBWOR204A	Use business technology

FPI20611 Certificate II in Timber Merchandising

Modification History

Release 2

Three new units added to elective bank:

- FPICOT2241
- FPICOT3263
- FPICOT3264

Elective unit HLTF311A replaces HLTF301C – Not equivalent

Imported units updated to current release:

- SIRXADM001A
- SIRXFIN002A
- SIRXICT001A
- SIRXINV001A

Release 1.1

Six imported units of competency updated:

- SIRXCCS202 replaces SIRXCCS002A - Equivalent
- BSBCUS301B replaces BSBCUS301A - Equivalent
- SIRXCCS201 replaces SIRXCCS001A - Equivalent
- SIRXFIN201 replaces SIRXFIN001A - Equivalent
- SIRXMER201 replaces SIRXMER001A - Equivalent
- SIRXSLS201 replaces SIRXSLS001A - Equivalent

Description

This qualification is designed for job roles in the timber merchandising sector of the forest and forest products industry.

Pathways Information

This qualification has one employment pathway for timber merchandising. This is:

- Customer Service / Sales Assistant (Retail or Wholesale)

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
<p>The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.</p>	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Apply detailed specialised knowledge of product to provide accurate advice to customers • Conduct communication with customers in a professional, courteous manner, according to store policy • Use effective questioning/active listening and observation skills to identify customers' special requirements • Use verbal and non-verbal communication to develop rapport with customers during service delivery
Teamwork	<ul style="list-style-type: none"> • Convey product knowledge to other staff members as required • Follow work plans to improve environmental practices and resource efficiency • Notify appropriate personnel in the event of an emergency • Provide a quality service environment by treating customers and team members in a courteous and professional manner through all stages of the service/sales procedure
Problem-solving	<ul style="list-style-type: none"> • Accurately identify the nature of customer complaints, resolve complaints and provide service to customers

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<p>according to store policies</p> <ul style="list-style-type: none"> • Follow safe workplace procedures and safe work instructions for controlling risks • Identify and report occupational health and safety issues and risks in the work area to appropriate personnel • Promptly refer unresolved customer dissatisfaction or complaints to supervisor
Initiative and enterprise	<ul style="list-style-type: none"> • Promptly identify customers with special needs or requirements by observation and questioning • Recognise and act upon opportunities to deliver additional levels of service beyond the customer's immediate request • Suggest improvements to workplace practices and resource efficiency to relevant personnel • Take opportunities to turn incidents of customer dissatisfaction into a demonstration of high quality service to customers in line with store policy
Planning and organising	<ul style="list-style-type: none"> • Access and apply workplace safety procedures • Accurately identify and comply with safety signs and symbols • Accurately locate, record and report workplace information • Gather, convey and receive information
Self-management	<ul style="list-style-type: none"> • Identify and comply with applicable occupational health and safety, legislative and organisational requirements relevant to communicating and interacting with others • Maintain work relationships • Safely and efficiently follow environmental care procedures according to organisational requirements • Seek appropriate support to assist and improve own performance to achieve personal and organisational goals and objectives
Learning	<ul style="list-style-type: none"> • Establish opportunities for professional development in consultation with appropriate personnel in accordance with organisational procedures • Identify opportunities for professional development • Practise and carry out emergency and evacuation procedures in the event of an emergency • Record and report information regarding learning and competency development in accordance with organisational requirements
Technology	<ul style="list-style-type: none"> • Select equipment appropriate to work task requirements and use in accordance with manufacturer's recommendations, which may include telephones or communications

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<p>equipment, tools, machinery, vehicles, navigational aids, instruments, computers and computer software, printers, facsimile machines and photocopiers</p> <ul style="list-style-type: none"> • Use a range of communication/electronic equipment
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Packaging Rules

Total number of units = 13

- 6 core units plus
- 7 elective units, consisting of:
 - 3 units from Group A
 - up to 4 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate I, II or III level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the timber merchandising sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2205B	Follow OHS policies and procedures
	SIRXCCS202	Interact with customers
	SIRXSLS002A	Advise on products and services

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
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**Sawing
Operations**

FPICOT2205B	Tail out materials
FPICOT2208B	Resaw boards and timber
FPICOT2218B	Cross cut materials with a fixed saw
FPICOT2229B	Dock material to length
FPICOT2238A	Cut materials with a hand-held chainsaw
FPITMM2201B	Cut material to length and angles
FPITMM2202B	Machine material
FPIWPP2201B	Cut panels

**Grading &
Testing**

FPICOR2207B	Maintain quality and product care
FPICOT2212B	Grade hardwood sawn and milled products
FPICOT2213B	Grade softwood sawn and milled products
FPICOT2214B	Grade cypress sawn and milled products
FPICOT2215B	Visually stress grade hardwood
FPICOT2216B	Visually stress grade softwood
FPICOT2217B	Visually stress grade cypress

**Warehousing &
Distribution**

FPICOT2228B	Store materials
FPICOT3264	Build and maintain timber stacks
SIRXINV001A	Perform stock control procedures
TLIA2012A	Pick and process orders
TLID2010A	Operate a forklift
TLID2012A	Operate specialised load shifting equipment
TLID2013A	Move materials mechanically using automated equipment
TLILIC2001A	Licence to operate a forklift truck

Retail	BSBCUS301B	Deliver and monitor a service to customers
	FPICOT2241	Apply wood and timber product knowledge
	SIRXCCS201	Apply point-of-sale handling procedures
	SIRXFIN201	Balance and secure point-of-sale terminal
	SIRXICT001A	Operate retail technology
	SIRXMER201	Merchandise products
	SIRXRSK001A	Minimise theft
	SIRXSLS201	Sell products and services

Timber Products	FPICOT2207B	Dress boards and timber
	FPICOT2219B	Use hand-held tools
	FPICOT2230B	Assemble products

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Machinery & Equipment	FPICOT2237A	Maintain chainsaws
	TLIC2002A	Drive light rigid vehicle
	TLIC3003A	Drive medium rigid vehicle
Load Handling	TLID2004A	Load and unload goods/cargo
	TLID2047A	Prepare cargo for transfer with slings
Safety & Quality Processes	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA311A	Apply first aid

Administration & Business	BSBINM201A	Process and maintain workplace information
	BSBITU201A	Produce simple word processed documents
	BSBWOR204A	Use business technology
	SIRXADM001A	Apply retail office procedures
	SIRXFIN002A	Perform retail finance duties

FPI20711 Certificate II in Timber Truss and Frame Design and Manufacture

Modification History

Release 2

Two new units added to elective bank:

- FPICOT3263
- FPICOT3264

Elective unit HLTFA311A replaces HLTFA301C – Not equivalent

Release 1.1

Two imported units of competency updated:

- MSS402001A replaces MSACMS200A - Equivalent
- MSS402051A replaces MSACMT251A - Equivalent

Description

This qualification is designed for job roles in the timber truss and frame sector of the forest and forest products industry.

Pathways Information

This qualification has one employment pathway for typical operational environments of timber truss and frame design. This is:

- Production Assistant (Timber Truss & Frame)

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Interact appropriately with colleagues and others in the workplace Gather, convey and receive information Accurately convey instructions
Teamwork	<ul style="list-style-type: none"> Participate in work relationships Seek and provide responses from/to others Make constructive contributions to team meetings
Problem-solving	<ul style="list-style-type: none"> Identify problems and form resolution strategies Use common fault finding techniques Identify potential hazards in the work area and demonstrate appropriate response procedures
Initiative and enterprise	<ul style="list-style-type: none"> Select equipment appropriate to work task Identify, monitor and maintain positive work practices Report improvements to workplace practices and resource efficiency to relevant personnel
Planning and organising	<ul style="list-style-type: none"> Review and identify work requirements Monitor on-site movement of material Plan visual assessment processes
Self-management	<ul style="list-style-type: none"> Check own role and responsibilities with appropriate personnel Identify and prioritise work tasks within designated timeframes Select resources to be used in own work role Maintain and monitor quality of personal output
Learning	<ul style="list-style-type: none"> Identify opportunities for professional development Actively seek feedback on performance Seek appropriate support to assist and improve own performance
Technology	<ul style="list-style-type: none"> Use tools, equipment and machinery appropriate to work task Apply the recognition of timber technology

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> • Use hand-held tools • Regularly maintain machinery and equipment
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Packaging Rules

Total number of units = 13

- 7 core units plus
- 6 elective units, consisting of:
 - up to 6 units from Group A
 - up to 2 units from Group B
 - up to 2 units recommended for packaging at Certificate I, II or III level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the timber truss and frame design sector of the industry

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR2203B	Follow environmental care procedures
	FPICOR2205B	Follow OHS policies and procedures
	FPICOR2207B	Maintain quality and product care
	FPICOT2219B	Use hand-held tools
	FPICOT2235A	Assess timber for manufacturing potential

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
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Forest	FPICOT2201B	Stack and bind material
	FPICOT2210B	Tally material
	FPICOT2227B	Process orders and despatch products
	FPICOT2228B	Store materials
	FPICOT2229B	Dock material to length
	FPICOT2230B	Assemble products
	FPICOT2232B	Cut material to shape using a saw
	FPICOT3264	Build and maintain timber stacks
	FPISAW2205B	Assemble materials using nail plates
	FPITMM2201B	Cut material to length and angles
	FPITMM2203A	Read and interpret timber truss, floor and/or frame fabrication plans
Business	BSBINM201A	Process and maintain workplace information
	BSBWOR204A	Use business technology
Health and Safety	HLTFA311A	Apply first aid
Manufacturing	FPICOT3263	Maintain and contribute to energy efficiency
	MSS402001A	Apply competitive systems and practices
	MSS402051A	Apply quality standards
Transport	TLID2010A	Operate a forklift
	TLID3014A	Load and unload vehicles carrying special loads
	TLID2047A	Prepare cargo for transfer with slings

Construction CPCCLDG3001A Licence to perform dogging

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Forest	FPICOR3204B	Visually assess materials
	FPICOT3214B	Take off material quantities
	FPICOT3241B	Assemble timber wall frames
	FPICOT3242B	Lay up timber roof trusses
	FPICOT3243B	Operate a truss press
	FPITMM3207A	Set up timber floor trusses

FPI30111 Certificate III in Forest Growing and Management

Modification History

Release 3

Mapping of FPI30111 updated to reflect change of usage recommendation to Current.

One new unit added to elective bank: FPICOT3263

Elective unit HLTF412A replaces HLTF402C – Not equivalent

Elective unit PUAFIR309B updated to latest release

Release 2

Four imported units of competency updated:

- RIIMPO318B replaces RIIMPO318A - Equivalent
- RIIMPO320B replaces RIIMPO320A - Equivalent
- RIIMPO321B replaces RIIMPO321A - Equivalent
- RIIVEH304B replaces RIIVEH304A - Equivalent

FPIFGM3207B added to Group A, Tree Growing and Maintenance as per Case for Endorsement, November 2011

Release 1

Qualification code updated to FPI30111 in FPI11 Version 1.

The following units have been added to the qualification as electives:

- AHCCHM304A Transport, handle and store chemicals
- FPICOT3255 Apply silvicultural principles
- FPICOT3256 Apply biodiversity protection principles
- FPICOT3257 Follow cultural heritage requirements
- FPICOT3258 Comply with soil and water protection
- FPICOT3259 Operate a four-wheel drive on unsealed roads
- FPICOT3260 Recover four-wheel drive vehicles
- FPIFGM3212 Fall trees manually (intermediate)
- FPIFGM3213 Fall trees manually (advanced)
- FPIFGM3214 Operate a four-wheel drive in a towing situation

Description

This qualification is designed for job roles in the forest growing and management sector of the forest and forest products industry.

Pathways Information

This qualification has seven employment pathways for typical operational environments of forest growing and management. These are:

- Arboriculture Technician
- Farm Forestry Technician
- Forestry Technician
- Nursery Technician
- Supervisor (Forestry Operations)
- Tree Planter
- Silviculturalist

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Communicate information from line manager/management to the team • Communicate unresolved issues to line manager/

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<p>management and follow up to ensure action is taken in response</p> <ul style="list-style-type: none"> • Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> • Actively encourage and support team members to participate in team activities and communication processes • Identify appropriate personnel in the event of an emergency
Problem-solving	<ul style="list-style-type: none"> • Limited responsibility for addressing issues, concerns and problems identified by team members or referring them to relevant persons as required • Follow safe workplace procedures and safe work instructions for controlling risks and protecting the environment • Identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures • Monitor environmental measures and impact on the environment and take corrective action as required according to workplace procedures
Initiative and enterprise	<ul style="list-style-type: none"> • Detect and assess hazards in the work area and report to appropriate personnel • Encourage team members to participate in the planning, decision making and operational aspects of the work team to their level of responsibility • Monitor hazardous and flammable substances to assess the potential of spillage and combustion
Planning and organising	<ul style="list-style-type: none"> • Record and report workplace information and maintain documentation • Identify and comply with occupational health and safety, legislative and organisational requirements relevant to implementing health, safety and environment policies and procedures • Organise duties, equipment and materials according to health, safety and environmental requirements and organisational procedures • Plan evaluation processes according to site procedures
Self-management	<ul style="list-style-type: none"> • Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with customers • Follow safe workplace procedures for dealing with environmental incidents, accidents and emergencies within scope of responsibilities • Integrate care for the environment into all day-to-day activities • Seek appropriate support to assist and improve own

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	performance to achieve personal and organisational goals and objectives
Learning	<ul style="list-style-type: none"> Identify opportunities for professional development Implement training and operational controls according to workplace procedures, which may include: <ul style="list-style-type: none"> in-house or external training programs one-on-one supervision programs that maintain up-to-date knowledge of legislative changes at the local, state and federal level Practise and record emergency and evacuation procedures in the event of an emergency Record and report information regarding learning and competency development according to organisational requirements
Technology	<ul style="list-style-type: none"> Record and report health, safety and environment procedures according to workplace procedures, which may be manual, or using a computer-based system or other appropriate organisational communication system Use and maintain relevant tools, machinery and equipment

Packaging Rules

Total number of units = 13

- 6 core units plus
- 7 elective units, consisting of:
 - 3 units from Group A
 - up to 4 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the forest growing and management sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry

FPICOR2202B	Communicate and interact effectively in the workplace
FPICOR3201B	Implement safety, health and environment policies and procedures
FPICOR3203B	Evaluate fire potential and prevention
HLTFA301C	Apply first aid

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Fire Control	AHCWRK302A	Monitor weather conditions
	PUAFIR303B	Suppress wildfire (unit has PUAFIR204B Respond to wildfire as a prerequisite)
	PUAFIR309B	Operate pumps (unit has the following prerequisite units: PUAFIR202B Respond to isolated/remote structure fire OR PUAFIR203B Respond to urban fire OR PUAFIR204B Respond to wildfire OR PUAFIR205B Respond to aviation incident (specialist))
	PUALAW002B	Conduct initial investigation at incident scene
	PUAOHS002B	Maintain safety at an incident scene
	PUATEA002B	Work autonomously
	Breeding and Propagation	AHCNSY301A
AHCNSY306A		Implement a propagation plan
FPIFGM3201B		Manage seed collection
FPIFGM3202B		Extract seed
Site Establishment and	AHCINF303A	Plan and construct conventional fencing

Maintenance	AHCIRG301A	Implement a maintenance program for an irrigation system
	AHCIRG306A	Troubleshoot irrigation systems
	AHCLSC302A	Construct landscape features using concrete
	AHCLSC304A	Erect timber structures and features
	AHCSAW302A	Implement erosion and sediment control measures
	FPICOT3221B	Rehabilitate tracks, quarries and landings
	FPIFGM3209B	Construct and maintain forest roads and tracks
	FPIFGM3210B	Patrol forest
Grading and Testing	FPICOR3204B	Visually assess materials
	FPICOT3223B	Grade and mark logs
	FPICOT3250A	Prepare timber to meet import/export compliance requirements
Tree Growing & Maintenance	FPICOR3202B	Conduct quality and product care procedures
	FPICOT3252A	Use environmental care procedures to undertake fire salvage operations
	FPIFGM3212	Fall trees manually (intermediate)
	FPIFGM3213	Fall trees manually (advanced)
	FPIFGM3206B	Plan and implement non-commercial thinning operations
	FPIFGM3207B	Coordinate stem improvement
	FPIFGM3211B	Manage coppice stems
	AHCPMG301A	Control weeds
	AHCPMG302A	Control plants, pests, diseases and disorders
	AHCARB307A	Undertake complex tree climbing

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Machinery and Equipment	AHCMOM301A	Coordinate machinery and equipment maintenance and repair
	FPICOT3259	Operate a four-wheel drive on unsealed roads
	FPICOT3260	Recover four-wheel drive vehicles
	FPIFGM3214	Operate a four wheel drive in a towing situation
	FPIFGM3215	Perform complex 4x4 operations
Specialist Machinery and Equipment	A maximum of 2 units may be selected from this field	
	FPICOT3238B	Operate a pole saw
	RIIHAN308A	Load and unload plant
	RIIMPO315A	Conduct tractor operations
	RIIMPO317A	Conduct roller operations
	RIIMPO318B	Conduct civil construction skid steer loader operations
	RIIMPO319A	Conduct backhoe/loader operations
	RIIMPO320B	Conduct civil construction excavator operations
	RIIMPO321B	Conduct civil construction wheeled front end loader operations
	RIIMPO322A	Conduct civil construction tracked front end loader operations
	RIIMPO324A	Conduct civil construction grader operations
	RIIVEH304B	Conduct tip truck operations
	TLID3036A	Lift and move load using a mobile crane
Load Handling	AHCCHM304A	Transport, handle and store chemicals
	TLID3011A	Conduct specialised forklift operations
	TLID3014A	Load and unload vehicles carrying special loads
Safety and	AHCCHM303A	Prepare and apply chemicals

Quality Processes	FPICOT3202B	Navigate in remote or trackless areas
	FPICOT3254A	Implement environmentally sustainable work practices in the work area/work site
	FPICOT3255	Apply silvicultural principles
	FPICOT3256	Apply biodiversity protection principles
	FPICOT3257	Follow cultural heritage requirements
	FPICOT3258	Comply with soil and water protection
	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA412A	Apply advanced first aid (unit has HLTFA311A Apply first aid as a prerequisite)
	TLID3035A	Operate a boom type elevating work platform
Administration and Business	BSBINM301A	Organise workplace information
	BSBITU306A	Design and produce business documents
Communication and Relationships	BSBFLM303C	Contribute to effective workplace relationships
	FPICOT3222B	Present forestry information and interpretations programs
Planning and Analysis	BSBFLM305C	Support operational plan

FPI30113 Certificate III in Forest Growing and Management

Modification History

Release 2

Mapping to FPI30111 removed.

Release 1

Qualification released as FPI30113 in FPI11 Version 2.

Core unit HLTF A311A replaces HLTF A301C – Not equivalent

One new unit added to elective bank: FPICOT3263

Elective unit HLTF A412A replaces HLTF A402C – Not equivalent

Imported units updated to current release:

- PUA FIR303B
- PUA FIR309B
- PUA LAW002B
- PUA OHS002B
- PUA TEA002B

Description

This qualification is designed for job roles in the forest growing and management sector of the forest and forest products industry.

Pathways Information

This qualification has seven employment pathways for typical operational environments of forest growing and management. These are:

- Arboriculture Technician
- Farm Forestry Technician
- Forestry Technician
- Nursery Technician
- Supervisor (Forestry Operations)
- Tree Planter
- Silviculturalist

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Communicate information from line manager/management to the team Communicate unresolved issues to line manager/management and follow up to ensure action is taken in response Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> Actively encourage and support team members to participate in team activities and communication processes Identify appropriate personnel in the event of an emergency
Problem-solving	<ul style="list-style-type: none"> Limited responsibility for addressing issues, concerns and problems identified by team members or referring them to relevant persons as required Follow safe workplace procedures and safe work instructions for controlling risks and protecting the environment Identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures Monitor environmental measures and impact on the environment and take corrective action as required according to workplace procedures

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Initiative and enterprise	<ul style="list-style-type: none"> • Detect and assess hazards in the work area and report to appropriate personnel • Encourage team members to participate in the planning, decision making and operational aspects of the work team to their level of responsibility • Monitor hazardous and flammable substances to assess the potential of spillage and combustion
Planning and organising	<ul style="list-style-type: none"> • Record and report workplace information and maintain documentation • Identify and comply with occupational health and safety, legislative and organisational requirements relevant to implementing health, safety and environment policies and procedures • Organise duties, equipment and materials according to health, safety and environmental requirements and organisational procedures • Plan evaluation processes according to site procedures
Self-management	<ul style="list-style-type: none"> • Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with customers • Follow safe workplace procedures for dealing with environmental incidents, accidents and emergencies within scope of responsibilities • Integrate care for the environment into all day-to-day activities • Seek appropriate support to assist and improve own performance to achieve personal and organisational goals and objectives
Learning	<ul style="list-style-type: none"> • Identify opportunities for professional development • Implement training and operational controls according to workplace procedures, which may include: <ul style="list-style-type: none"> • in-house or external training programs • one-on-one supervision • programs that maintain up-to-date knowledge of legislative changes at the local, state and federal level • Practise and record emergency and evacuation procedures in the event of an emergency • Record and report information regarding learning and competency development according to organisational requirements
Technology	<ul style="list-style-type: none"> • Record and report health, safety and environment procedures according to workplace procedures, which may be manual, or using a computer-based system or other appropriate

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	organisational communication system • Use and maintain relevant tools, machinery and equipment
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Packaging Rules

Total number of units = 13

- 6 core units plus
- 7 elective units, consisting of:
 - 3 units from Group A
 - up to 4 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the forest growing and management sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOR3203B	Evaluate fire potential and prevention
	HLTFA311A	Apply first aid

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Fire Control	AHCWRK302A	Monitor weather conditions
	PUAFIR303B	Suppress wildfire (unit has PUAFIR204B Respond to wildfire as a prerequisite)

	PUAFIR309B	Operate pumps (unit has the following prerequisite units: PUAFIR203B Respond to urban fire OR PUAFIR204B Respond to wildfire OR PUAFIR205B Respond to aviation incident (specialist))
	PUALAW002B	Conduct initial investigation at incident scene
	PUAOHS002B	Maintain safety at an incident scene
	PUATEA002B	Work autonomously
Breeding and Propagation	AHCNSY301A	Maintain nursery plants
	AHCNSY306A	Implement a propagation plan
	FPIFGM3201B	Manage seed collection
	FPIFGM3202B	Extract seed
Site Establishment and Maintenance	AHCINF303A	Plan and construct conventional fencing
	AHCIRG301A	Implement a maintenance program for an irrigation system
	AHCIRG306A	Troubleshoot irrigation systems
	AHCLSC302A	Construct landscape features using concrete
	AHCLSC304A	Erect timber structures and features
	AHCSAW302A	Implement erosion and sediment control measures
	FPICOT3221B	Rehabilitate tracks, quarries and landings
	FPIFGM3209B	Construct and maintain forest roads and tracks
	FPIFGM3210B	Patrol forest
Grading and Testing	FPICOR3204B	Visually assess materials
	FPICOT3223B	Grade and mark logs

	FPICOT3250A	Prepare timber to meet import/export compliance requirements
Tree Growing & Maintenance	FPICOR3202B	Conduct quality and product care procedures
	FPICOT3252A	Use environmental care procedures to undertake fire salvage operations
	FPIFGM3212	Fall trees manually (intermediate)
	FPIFGM3213	Fall trees manually (advanced)
	FPIFGM3206B	Plan and implement non-commercial thinning operations
	FPIFGM3207B	Coordinate stem improvement
	FPIFGM3211B	Manage coppice stems
	AHCPMG301A	Control weeds
	AHCPMG302A	Control plants, pests, diseases and disorders
	AHCARB307A	Undertake complex tree climbing

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Machinery and Equipment	AHCMOM301A	Coordinate machinery and equipment maintenance and repair
	FPICOT3259	Operate a four-wheel drive on unsealed roads
	FPICOT3260	Recover four-wheel drive vehicles
	FPIFGM3214	Operate a four wheel drive in a towing situation
	FPIFGM3215	Perform complex 4x4 operations
Specialist Machinery and Equipment	A maximum of 2 units may be selected from this field	
	FPICOT3238B	Operate a pole saw
	RIIHAN308A	Load and unload plant
	RIIMPO315A	Conduct tractor operations

	RIIMPO317A	Conduct roller operations
	RIIMPO318B	Conduct civil construction skid steer loader operations
	RIIMPO319A	Conduct backhoe/loader operations
	RIIMPO320B	Conduct civil construction excavator operations
	RIIMPO321B	Conduct civil construction wheeled front end loader operations
	RIIMPO322A	Conduct civil construction tracked front end loader operations
	RIIMPO324A	Conduct civil construction grader operations
	RIIVEH304B	Conduct tip truck operations
	TLID3036A	Lift and move load using a mobile crane
Load Handling	AHCCHM304A	Transport, handle and store chemicals
	TLID3011A	Conduct specialised forklift operations
	TLID3014A	Load and unload vehicles carrying special loads
Safety and Quality Processes	AHCCHM303A	Prepare and apply chemicals
	FPICOT3202B	Navigate in remote or trackless areas
	FPICOT3254A	Implement environmentally sustainable work practices in the work area/work site
	FPICOT3255	Apply silvicultural principles
	FPICOT3256	Apply biodiversity protection principles
	FPICOT3257	Follow cultural heritage requirements
	FPICOT3258	Comply with soil and water protection
	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA412A	Apply advanced first aid (unit has HLTFA311A Apply first aid as a prerequisite)
	TLID3035A	Operate a boom type elevating work platform

Administrati on and Business	BSBINM301A	Organise workplace information
	BSBITU306A	Design and produce business documents
Communicat ion and Relationship s	BSBFLM303C	Contribute to effective workplace relationships
	FPICOT3222B	Present forestry information and interpretations programs
Planning and Analysis	BSBFLM305C	Support operational plan

FPI30211 Certificate III in Harvesting and Haulage

Modification History

Release 3

Mapping of FPI30211 updated to reflect change of usage recommendation to Current.

Packaging rules for special requirements for log truck driver descriptor updated.

Three new units added to elective bank:

- FPICOT3261 (new unit based on non-equivalent FPICOT3226B)
- FPICOT3262
- FPICOT3263

Elective units updated:

- HLTF412A replaces HLTF402C – Not equivalent
- TLILIC2016B replaces TLILIC2016A – Equivalent
- TLILIC3017B replaces TLILIC3017A – Equivalent
- TLILIC3018B replaces TLILIC3018A – Equivalent
- PUAFIR309B updated to latest release

Release 2

Two imported units of competency updated:

- RIIVEH304B replaces RIIVEH304A - Equivalent
- HLTF302C replaces HLTF302A - Equivalent

Due to a typographical error, the incorrect code was entered. TLILIC3017A has now replaced TLILIC3018A as per the Case for Endorsement.

Release 1

Qualification code updated to FPI30211 in FPI11 Version 1.

The following units have been added to the qualification as electives:

- FPICOT3255 Apply silvicultural principles
- FPICOT3256 Apply biodiversity protection principles
- FPICOT3257 Follow cultural heritage requirements
- FPICOT3258 Comply with soil and water protection
- FPICOT3259 Operate a four-wheel drive on unsealed roads
- FPICOT3260 Recover four-wheel drive vehicles
- FPIFGM3214 Operate a four-wheel drive in a towing situation
- FPIFGM3215 Perform complex four-wheel drive operations
- FPIHAR3220 Harvest trees manually (intermediate)

- FPIHAR3221 Harvest trees manually (advanced).

Description

This qualification is designed for job roles in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

This qualification has eleven employment pathways for typical operational environments of harvesting and haulage. These are:

- Bulldozer Operator
- Excavator Operator
- Feller Buncher Operator
- Forest Harvester
- Forwarder Operator
- Harvesting Technician
- In-field Chipper Operator
- Loader Operator
- Log truck driver
- Mobile Equipment Operator
- Skidder Operator

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Complete health, safety and environment, hazard, environmental and incident reports according to workplace procedures and state or territory legislation • Establish and maintain communication with others according to occupational health and safety requirements • Prepare reports to supervisors in a timely manner, presenting all relevant facts according to established organisational procedures • Record and report quality and product care procedures according to workplace procedures
Teamwork	<ul style="list-style-type: none"> • Seek first aid assistance from others in a timely manner • Share relevant workplace information with co-workers to achieve designated individual and team goals and objectives • Support team members in meeting expected outcomes
Problem-solving	<ul style="list-style-type: none"> • Participate in workplace meetings using agreed processes to resolve issues • Assess and rectify problems to avoid repetition of lost product within limits of own role • Monitor environmental measures and impact on the environment and take corrective action as required according to workplace procedures • Plan product recovery to optimise resource value and minimise waste
Initiative and enterprise	<ul style="list-style-type: none"> • Apply, implement and adhere to quality system procedures • Detect and assess hazards in the work area and report to appropriate personnel • Identify and clarify contradictions, ambiguity, uncertainty or misunderstandings with appropriate personnel • Monitor hazardous and flammable substances to assess the potential of spillage and combustion
Planning and organising	<ul style="list-style-type: none"> • Gather, convey and receive information • Identify and assess organisational environmental goals • Plan evaluation processes according to site procedures • Identify, review and interpret work requirements

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Self-management	<ul style="list-style-type: none"> • Complete daily work activities • Follow safe workplace procedures for dealing with environmental incidents, accidents and emergencies within scope of responsibilities • Integrate care for the environment into all day-to-day activities • Maintain work relationships
Learning	<ul style="list-style-type: none"> • Establish opportunities for professional development in consultation with appropriate personnel according to organisational procedures • Implement training and operational controls according to workplace procedures, which may include: <ul style="list-style-type: none"> • in-house or external training programs • one-on-one supervision • programs that maintain up-to-date knowledge of legislative changes at the local, state and federal level • Practise and record emergency and evacuation procedures in the event of an emergency • Record and report information regarding learning and competency development according to organisational requirements
Technology	<ul style="list-style-type: none"> • Monitor equipment conditions for overheating and electrical sparking and respond according to workplace procedures • Check equipment to ensure it is serviceable for emergencies

Packaging Rules

Total number units = 13

- 7 core units plus
- 6 elective units, consisting of:
 - 2 units from Group A
 - up to 4 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the harvesting and haulage sector of the industry.

Guidelines for use of qualification descriptors:

Descriptors are minimum industry recommendations to assist training providers, employers and trainees with the development of training plans for those employed in the job roles below.

The qualification descriptor may be used to describe a specific job profile.

The use of a descriptor does not alter the nationally recognised qualification and the descriptor selected must adhere to the qualification's packaging rules.

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOR3202B	Conduct quality and product care procedures
	FPICOR3203B	Evaluate fire potential and prevention
	HLTFA301C	Apply first aid

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Harvesting Operations	AHCARB307A	Undertake complex tree climbing
	AHCEXP303A	Prepare and use explosives
	FPICOT3252A	Use environmental care procedures to undertake fire salvage operations
	FPICOT3261	Transport forestry logs using trucks
	FPICOT3262	Transport forestry produce using trucks
	FPICOT3253A	Convert timber residue into products for further use
	FPICOT3254A	Implement environmentally sustainable work practices in the work area/work site

	FPIHAR3201B	Monitor log recovery (rigging slinger)
	FPIHAR3216A	Conduct forestry operations using crawler tractor
	FPIHAR3217A	Conduct skidder operations
	FPIHAR3218A	Conduct loader operations
	FPIHAR3206C	Conduct forwarder operations
	FPIHAR3207C	Conduct feller buncher operations
	FPIHAR3208C	Conduct boom delimber operations
	FPIHAR3210C	Conduct mechanical processor operations
	FPIHAR3211B	Operate yarder
	FPIHAR3213B	Conduct mechanically assisted tree falling operations
	FPIHAR3214C	Operate a single grip harvester
	FPIHAR3215C	Operate a heavy production mobile chipper
	FPIHAR3219A	Conduct excavator operations with grabs
	FPIHAR3220	Harvest trees manually (intermediate)
	FPIHAR3221	Harvest trees manually (advanced)
Grading and Testing	FPICOR3204B	Visually assess materials
	FPICOT3223B	Grade and mark logs
	FPICOT3250A	Prepare timber to meet import/export compliance requirements
Machinery and Equipment	FPICOT3224B	Plan and monitor equipment maintenance

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
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Fire Control	AHCWRK302A	Monitor weather conditions
	PUAFIR303B	Suppress wildfire (unit has PUAFIR204B Respond to wildfire as a prerequisite)
	PUAFIR309B	Operate pumps (unit has three prerequisites – check training.gov.au)
	PUAOHS002B	Maintain safety at an incident scene
	PUATEA002B	Work autonomously
Site Establishment and Maintenance	AHCNAR303A	Implement revegetation works
	FPICOT3221B	Rehabilitate tracks, quarries and landings
	FPIFGM3203B	Conduct an instrument survey
Machinery and Equipment	AHCMOM301A	Coordinate machinery and equipment maintenance and repair
	FPICOT3259	Operate a four-wheel drive on unsealed roads
	FPICOT3260	Recover four-wheel drive vehicles
	FPIFGM3214	Operate a four-wheel drive in a towing situation
	FPIFGM3215	Perform complex 4x4 operations
Specialist Machinery and Equipment	A maximum of two units may be selected from this field	
	RIIMPO315A	Conduct tractor operations
	RIIMPO317A	Conduct roller operations
	RIIMPO319A	Conduct backhoe/loader operations
	RIIMPO323A	Conduct civil construction dozer operations
	RIIMPO324A	Conduct civil construction grader operations
	RIIVEH304B	Conduct tip truck operations
	TLID3033A	Operate a vehicle-mounted loading crane

Load Handling	TLIC3063A	Operate vehicle carrying special loads
	TLID1001A	Shift materials safely using manual handling methods
	TLID3011A	Conduct specialised forklift operations
	TLID3014A	Load and unload vehicles carrying special loads
	TLIE3002A	Estimate/calculate mass, area and quantify dimensions
	TLIH2001A	Interpret road maps and navigate pre-determined routes

Specialised Log Truck Driver One of the following may be selected:

or	TLIC3004A	Drive heavy rigid vehicle
	TLILIC2016B	Licence to drive heavy rigid vehicle
or	TLIC3005A	Drive heavy combination vehicle
	TLILIC3017B	Licence to drive heavy combination vehicle
or	TLIC4006A	Drive multi-combination vehicle
	TLILIC3018B	Licence to drive multi-combination vehicle

Safety and Quality Processes	AHCWRK304A	Respond to rescue incidents
	FPICOT3202B	Navigate in remote or trackless areas
	FPICOT3255	Apply silvicultural principles
	FPICOT3256	Apply biodiversity protection principles
	FPICOT3257	Follow cultural heritage requirements

	FPICOT3258	Comply with soil and water protection
	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA302C	Provide first aid in remote situation (to be assessed in conjunction with or after HLTFA311A Apply first aid)
	HLTFA412A	Apply advanced first aid (has HLTFA311A Apply first aid as a prerequisite)
	TLID3035A	Operate a boom type elevating work platform
	TLIF2010A	Apply fatigue management strategies
Administration and Business	BSBINM301A	Organise workplace information
	BSBITU306A	Design and produce business documents
Communication and Relationships	BSBFLM303C	Contribute to effective workplace relationships
	FPICOT3222B	Present forestry information and interpretations programs
Planning and Analysis	BSBFLM305C	Support operational plan

Special requirements for log truck driver descriptor:

The log truck driver descriptor can only be used when electives have been selected from the Group A and B list of specialist units below.

Please note the learner must complete the two units indicated with an asterisk (*).

Log truck driver

GROUP A ELECTIVE UNITS

FPICOT3223B Grade and mark logs

FPICOT3224B Plan and monitor equipment maintenance

*FPICOT3261 Transport forestry logs using trucks

FPICOT3262 Transport forestry produce using trucks
FPIHAR3218A Conduct loader operations
FPIHAR3219A Conduct excavator operations with grabs

GROUP B ELECTIVE UNITS

TLID1001A Shift materials safely using manual handling methods
TLID3014A Load and unload vehicles carrying special loads
TLIE3002A Estimate/calculate mass, area and quantify dimensions
*TLIF2010A Apply fatigue management strategies
TLIH2001A Interpret road maps and navigate pre-determined routes

At least one but no more than two of the following licensing/driving units must be completed to achieve log truck driver descriptor:

TLIC3004A Drive heavy rigid vehicle or TLILIC2016B Licence to drive heavy rigid vehicle

TLIC3005A Drive heavy combination vehicle or TLILIC3017B Licence to drive heavy combination vehicle

TLIC4006A Drive multi-combination vehicle or TLILIC3018B Licence to drive multi combination vehicle

FPI30213 Certificate III in Harvesting and Haulage

Modification History

Release 2

Mapping to FPI30211 removed.

Release 1

Qualification released as FPI30213 in FPI11 Version 2.

Core unit HLTF311A replaces HLTF301C – Not equivalent

Three new units added to elective bank:

- FPICOT3261 (new unit based on non-equivalent FPICOT3226B)
- FPICOT3262
- FPICOT3263

Elective units updated:

- HLTF412A replaces HLTF402C – Not equivalent
- TLILIC2016B replaces TLILIC2016A – Equivalent
- TLILIC3017B replaces TLILIC3017A – Equivalent
- TLILIC3018B replaces TLILIC3018A – Equivalent

Imported units updated to current release:

- PUAFIR303B
- PUAFIR309B
- PUAOHS002B
- PUATEA002B

Description

This qualification is designed for job roles in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

This qualification has eleven employment pathways for typical operational environments of harvesting and haulage. These are:

- Bulldozer Operator
- Excavator Operator
- Feller Buncher Operator
- Forest Harvester
- Forwarder Operator
- Harvesting Technician

- In-field Chipper Operator
- Loader Operator
- Log truck driver
- Mobile Equipment Operator
- Skidder Operator

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Complete health, safety and environment, hazard, environmental and incident reports according to workplace procedures and state or territory legislation • Establish and maintain communication with others according to occupational health and safety requirements • Prepare reports to supervisors in a timely manner, presenting all relevant facts according to established organisational procedures • Record and report quality and product care procedures according to workplace procedures
Teamwork	<ul style="list-style-type: none"> • Seek first aid assistance from others in a timely manner • Share relevant workplace information with co-workers to

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<p>achieve designated individual and team goals and objectives</p> <ul style="list-style-type: none"> • Support team members in meeting expected outcomes
Problem-solving	<ul style="list-style-type: none"> • Participate in workplace meetings using agreed processes to resolve issues • Assess and rectify problems to avoid repetition of lost product within limits of own role • Monitor environmental measures and impact on the environment and take corrective action as required according to workplace procedures • Plan product recovery to optimise resource value and minimise waste
Initiative and enterprise	<ul style="list-style-type: none"> • Apply, implement and adhere to quality system procedures • Detect and assess hazards in the work area and report to appropriate personnel • Identify and clarify contradictions, ambiguity, uncertainty or misunderstandings with appropriate personnel • Monitor hazardous and flammable substances to assess the potential of spillage and combustion
Planning and organising	<ul style="list-style-type: none"> • Gather, convey and receive information • Identify and assess organisational environmental goals • Plan evaluation processes according to site procedures • Identify, review and interpret work requirements
Self-management	<ul style="list-style-type: none"> • Complete daily work activities • Follow safe workplace procedures for dealing with environmental incidents, accidents and emergencies within scope of responsibilities • Integrate care for the environment into all day-to-day activities • Maintain work relationships
Learning	<ul style="list-style-type: none"> • Establish opportunities for professional development in consultation with appropriate personnel according to organisational procedures • Implement training and operational controls according to workplace procedures, which may include: <ul style="list-style-type: none"> • in-house or external training programs • one-on-one supervision • programs that maintain up-to-date knowledge of legislative changes at the local, state and federal level • Practise and record emergency and evacuation procedures in the event of an emergency • Record and report information regarding learning and competency development according to organisational

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	requirements
Technology	<ul style="list-style-type: none"> • Monitor equipment conditions for overheating and electrical sparking and respond according to workplace procedures • Check equipment to ensure it is serviceable for emergencies

Packaging Rules

Total number units = 13

- 7 core units plus
- 6 elective units, consisting of:
 - 2 units from Group A
 - up to 4 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the harvesting and haulage sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOR3202B	Conduct quality and product care procedures
	FPICOR3203B	Evaluate fire potential and prevention
	HLTFA311A	Apply first aid

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Harvesting Operations	AHCARB307A	Undertake complex tree climbing
	AHCEXP303A	Prepare and use explosives
	FPICOT3252A	Use environmental care procedures to undertake fire salvage operations
	FPICOT3261	Transport forestry logs using trucks
	FPICOT3262	Transport forestry produce using trucks
	FPICOT3253A	Convert timber residue into products for further use
	FPICOT3254A	Implement environmentally sustainable work practices in the work area/work site
	FPIHAR3201B	Monitor log recovery (rigging slinger)
	FPIHAR3216A	Conduct forestry operations using crawler tractor
	FPIHAR3217A	Conduct skidder operations
	FPIHAR3218A	Conduct loader operations
	FPIHAR3206C	Conduct forwarder operations
	FPIHAR3207C	Conduct feller buncher operations
	FPIHAR3208C	Conduct boom delimber operations
	FPIHAR3210C	Conduct mechanical processor operations
	FPIHAR3211B	Operate yarder
	FPIHAR3213B	Conduct mechanically assisted tree falling operations
	FPIHAR3214C	Operate a single grip harvester
	FPIHAR3215C	Operate a heavy production mobile chipper
	FPIHAR3219A	Conduct excavator operations with grabs
FPIHAR3220	Harvest trees manually (intermediate)	

	FPIHAR3221	Harvest trees manually (advanced)
Grading and Testing	FPICOR3204B	Visually assess materials
	FPICOT3223B	Grade and mark logs
	FPICOT3250A	Prepare timber to meet import/export compliance requirements
Machinery and Equipment	FPICOT3224B	Plan and monitor equipment maintenance
GROUP B ELECTIVE UNITS		
Field	Unit Code	Unit Title
Fire Control	AHCWRK302A	Monitor weather conditions
	PUAFIR303B	Suppress wildfire (unit has PUAFIR204B Respond to wildfire as a prerequisite)
	PUAFIR309B	Operate pumps (unit has three prerequisites – check training.gov.au)
	PUAOHS002B	Maintain safety at an incident scene
	PUATEA002B	Work autonomously
Site Establishment and Maintenance	AHCNAR303A	Implement revegetation works
	FPICOT3221B	Rehabilitate tracks, quarries and landings
	FPIFGM3203B	Conduct an instrument survey
Machinery and Equipment	AHCMOM301A	Coordinate machinery and equipment maintenance and repair
	FPICOT3259	Operate a four-wheel drive on unsealed roads
	FPICOT3260	Recover four-wheel drive vehicles

FPIFGM3214 Operate a four-wheel drive in a towing situation

FPIFGM3215 Perform complex 4x4 operations

Specialist Machinery and Equipment

A maximum of two units may be selected from this field

RIIMPO315A Conduct tractor operations

RIIMPO317A Conduct roller operations

RIIMPO319A Conduct backhoe/loader operations

RIIMPO323A Conduct civil construction dozer operations

RIIMPO324A Conduct civil construction grader operations

RIIVEH304B Conduct tip truck operations

TLID3033A Operate a vehicle-mounted loading crane

Load Handling

TLIC3063A Operate vehicle carrying special loads

TLID1001A Shift materials safely using manual handling methods

TLID3011A Conduct specialised forklift operations

TLID3014A Load and unload vehicles carrying special loads

TLIE3002A Estimate/calculate mass, area and quantify dimensions

TLIH2001A Interpret road maps and navigate pre-determined routes

Specialised Log Truck Driver One of the following may be selected:

TLIC3004A Drive heavy rigid vehicle

or TLILIC2016B Licence to drive heavy rigid vehicle

	TLIC3005A	Drive heavy combination vehicle
or	TLILIC3017B	Licence to drive heavy combination vehicle
	TLIC4006A	Drive multi-combination vehicle
or	TLILIC3018B	Licence to drive multi-combination vehicle
Safety and Quality Processes	AHCWRK304A	Respond to rescue incidents
	FPICOT3202B	Navigate in remote or trackless areas
	FPICOT3255	Apply silvicultural principles
	FPICOT3256	Apply biodiversity protection principles
	FPICOT3257	Follow cultural heritage requirements
	FPICOT3258	Comply with soil and water protection
	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA302C	Provide first aid in remote situation (to be assessed in conjunction with or after HLTFA311A Apply first aid)
	HLTFA412A	Apply advanced first aid (has HLTFA311A Apply first aid as a prerequisite)
	TLID3035A	Operate a boom type elevating work platform
	TLIF2010A	Apply fatigue management strategies
Administration and Business	BSBINM301A	Organise workplace information
	BSBITU306A	Design and produce business documents
Communication and Relationships	BSBFLM303C	Contribute to effective workplace relationships
	FPICOT3222B	Present forestry information and interpretations programs

**Planning and
Analysis**

BSBFLM305C

Support operational plan

FPI30311 Certificate III in Sawmilling and Processing

Modification History

Release 2

Three new units added to elective bank:

- FPICOT2241
- FPICOT3263
- FPICOT3264

Imported elective units updated:

- MSS404060A replaces MSACMT460A – Not equivalent
- HLTFA412A replaces HLTFA402C – Not equivalent

Imported unit updated to current release:

- MEM18011C

Release 1.1

Three imported units of competency updated:

- RIIMPO321B replaces RIIMPO321A - Equivalent
- TLIF1002B replaces TLIF1002A - Equivalent
- MSS402001A replaces MSACMS200A - Equivalent

Due to a typographical error, FPICOT3215 was included incorrectly in the Group B Electives under Machinery and Equipment. This unit has been removed, as per the Case for Endorsement.

Description

This qualification is designed for job roles in the forest sawmilling and processing sector of the forest and forest products industry.

Pathways Information

This qualification has eleven employment pathways for typical operational environments of sawmilling and processing. These are:

- Benchman
- Chipper Operator
- Head Rig Operator
- Kiln Operator
- Machine Operator (e.g. Finger Jointing, Moulding, Planing)
- Production Technician

- Sawmilling Technician
- Sawyer
- Timber Grader
- Timber Products Technician
- Treatment Plant Operator

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to State/Territory licensing, legislative, regulatory or certification requirement.

Some imported units contained within the elective bank may be subject to State/Territory codes, regulations, licence and/or permit. These units must be implemented in line with the licensing requirements as outlined in the unit's Parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Gather, receive and respond to verbal and written instructions • Record and report quality and product care procedures according to workplace procedures • Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> • Contribute to team outcomes • Communicate and work safely with others in the work area

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • Support team members in meeting expected outcomes
Problem-solving	<ul style="list-style-type: none"> • Limited responsibility for addressing issues, concerns and problems identified by team members or referring them to relevant persons as required • Identify and resolve problems • Record and report assessment outcomes and distribution problems according to workplace procedures • Visually evaluate material characteristics for defects and quality
Initiative and enterprise	<ul style="list-style-type: none"> • Efficiently and safely follow quality and product care procedures • Monitor quality of output and follow product care procedures • Reject and dispose of sub-standard materials according to site requirements
Planning and organising	<ul style="list-style-type: none"> • Record and report workplace information and maintain documentation • Follow quality and product care procedures according to environmental legislation and workplace procedures • Monitor on-site movement of material to ensure intended flow is achieved • Review work order and clarify with appropriate personnel
Self-management	<ul style="list-style-type: none"> • Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with customers • Follow safe workplace procedures for dealing with environmental incidents, accidents and emergencies within scope of responsibilities • Integrate care for the environment into all day-to-day activities
Learning	<ul style="list-style-type: none"> • Establish opportunities for professional development in consultation with appropriate personnel according to organisational procedures • Practice and record emergency and evacuation procedures in the event of an emergency • Record and report information regarding learning and competency development according to organisational requirements • Support the team to identify and resolve problems impeding its performance
Technology	<ul style="list-style-type: none"> • Select equipment appropriate to work requirements and check for operational effectiveness according to manufacturer recommendations, which may include moisture

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	meters and lifting equipment for the movement of materials

Packaging Rules

Total number of units = 13

- 6 core units plus
- 7 elective units, consisting of:
 - 2 units from Group A
 - up to 5 units from Group A and/or Group B
 - up to 3 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the sawmilling and processing sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOR3202B	Conduct quality and product care procedures
	FPICOR3204B	Visually assess materials

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Logyard and/or	FPICOT3203B	Weigh loads

Material Preparation	FPICOT3227B	Receive and measure logs
Sawing Operations	FPISAW3202B	Produce sawn green boards
	FPISAW3203B	Break down logs
	FPISAW3204B	Saw flitches and cants
	FPISAW3227B	Select and saw logs in multi-species operations
	FPISAW3229B	Operate a portable sawmill
Grading and Testing	FPICOT3208B	Test strength of joints
	FPICOT3225B	Mechanically stress grade timber
	FPICOT3229B	Mechanically stress grade panels
	FPICOT3240B	Grade heavy structural/engineered products
	FPICOT3245B	Grade, sort and mark material
	FPICOT3246B	Test heavy structural/engineered products
	FPICOT3250A	Prepare timber to meet import/export compliance requirements
	FPISAW3223B	Assess wood chips
Timber Products	FPICOT2241	Apply wood and timber product knowledge
	FPICOT3205B	Dress boards using multi-headed machines
	FPICOT3206B	Cut material using high speed optimiser
	FPICOT3207B	Set up, operate and maintain finger jointing operations
	FPICOT3209B	Set up, operate and maintain end matching operations
	FPICOT3230B	Operate automated stacking equipment
	FPICOT3234B	Cut material using CNC sizing machines

	FPICOT3235B	Machine material using CNC machining and processing centres
	FPICOT3253A	Convert timber residue into products for further use
	FPISAW3226B	Saw logs using CNC optimising systems
	FPICOT3264	Build and maintain timber stacks
Timber Drying and Treatment	AHCCHM303A	Prepare and apply chemicals
	FPICOT3231B	Operate steam boiler
	FPICOT3232B	Operate heat plant
	FPICOT3248A	Dry timber in solar assisted kilns
	FPICOT3249A	Select timber preservation techniques
	FPISAW3201B	Treat timber
	FPISAW3205B	Dry hardwood
	FPISAW3206B	Dry softwood
Sawdoctoring	FPICOT3201B	Hand sharpen knives and blades
	FPICOT3211B	Maintain sawdoctoring tools
	FPICOT3212B	Replace saws, blades and guides
	FPICOT3213B	Manufacture cutting tools
	FPICOT3215B	Swage and shape saw blades
	FPICOT3216B	Assess and maintain saw performance
	FPICOT3217B	Assess and maintain cutter performance
	FPICOT3233B	Sharpen and align blades and knives
	FPICOT3237B	Produce templates
	FPISAW3207B	Sharpen band saws
	FPISAW3208B	Sharpen circular saws

FPISAW3209B	Align sawing production systems
FPISAW3210B	File and set saws
FPISAW3211B	Recondition guides
FPISAW3212B	Sharpen tipped circular saws
FPISAW3213B	Level and tension circular saws
FPISAW3214B	Join band saw blades
FPISAW3217B	Hard face saw teeth
FPISAW3218B	Replace tungsten tips
FPISAW3219B	Replace stellite tips
FPISAW3220C	Maintain wide band saw blades
FPISAW3221B	Profile saw blanks
FPISAW3222B	Recondition band mill wheels

Woodchipping	FPISAW3215B	Screen wood chips
	FPISAW3216B	Transfer wood chips
	FPISAW3223B	Assess wood chips
	FPISAW3224B	Coordinate and monitor the wood chip stockpile

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Machinery and Equipment	FPICOT2240	Cut material with a pole saw
	FPICOT3224B	Plan and monitor equipment maintenance
	FPICOT3259	Operate a four-wheel drive on unsealed roads
	FPICOT3260	Recover four wheel drive vehicles
	FPIFGM3214	Operate a four wheel drive in a towing situation
	MEM18011C	Shut down and isolate machines/equipment

Warehousing & Distribution	FPICOT3236B	Coordinate stock control procedures
	RIIMPO321B	Conduct civil construction wheeled front end loader operations
	TLIA3018A	Organise despatch operations
Load Handling	RIIMPO323A	Conduct civil construction dozer operations
	TLID3011A	Conduct specialised forklift operations
	TLID3014A	Load and unload vehicles carrying special loads
	TLID3043A	Shift loads using gantry equipment
Safety and Quality Processes	FPICOT3202B	Navigate in remote or trackless areas
	FPICOR3203B	Evaluate fire potential and prevention
	FPICOT3254A	Implement environmentally sustainable work practices in the work area/work site
	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA412A	Apply advanced first aid (unit has HLTFA311A Apply first aid as a prerequisite)
	TLID3035A	Operate a boom type elevating work platform
	TLIF1002B	Conduct housekeeping activities
	Administration and Business	BSBINM301A
BSBITU306A		Design and produce business documents
Communication and Relationships	BSBFLM303C	Contribute to effective workplace relationships

Competitive Manufacturing	MSS402001A	Apply competitive systems and practices
	MSS404060A	Facilitate the use of planning software systems in a work area or team
Planning and Analysis	BSBFLM305C	Support operational plan

FPI30411 Certificate III in Wood Panel Products

Modification History

Release 2

Three new units added to elective bank:

- FPICOT2241
- FPICOT3263
- FPICOT3264

Imported units updated to non-equivalent versions:

- HLTF311A replaces HLTF301C – Not equivalent
- HLTF412A replaces HLTF402C – Not equivalent
- MSS402060A replaces MSACMT260A – Not equivalent
- MSS404060A replaces MSACMT460A – Not equivalent

Imported unit updated to current release:

- MEM18011C

Release 1.1

Two imported units of competency updated:

- MSS402001A replaces MSACMS200A - Equivalent
- TLIF1002B replaces TLIF1002A - Equivalent

Description

This qualification is designed for job roles in the wood panel products sector of the forest and forest products industry.

Pathways Information

This qualification has seven employment pathways for typical operational environments of wood panel products. These are:

- Engineered Timber Products Technician / Operator
- Kiln Operator
- Production Technician / Operator (Laminates)
- Production Technician / Operator (Panel and Board)
- Production Technician / Operator (Veneer)
- Timber Fabricator
- Timber Fabricator (Laminates)

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Gather, receive and respond to verbal and written instructions Record and report quality and product care procedures according to workplace procedures Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> Contribute to team outcomes Communicate and work safely with others in the work area Encourage and support team members to take responsibility for their own work and assist each other in undertaking required roles and responsibilities Support team members in meeting expected outcomes
Problem-solving	<ul style="list-style-type: none"> Address issues, concerns and problems identified by team members or refer to relevant persons as required Identify and resolve problems Record and report assessment outcomes and distribution

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<p>problems according to workplace procedures</p> <ul style="list-style-type: none"> • Visually evaluate material characteristics for defects and quality
Initiative and enterprise	<ul style="list-style-type: none"> • Efficiently and safely follow quality and product care procedures • Monitor quality of output and follow product care procedures • Reject and dispose of sub-standard materials according to site requirements
Planning and organising	<ul style="list-style-type: none"> • Record and report workplace information and maintain documentation • Follow quality and product care procedures according to environmental legislation and workplace procedures • Identify team purpose, roles, responsibilities, goals, plans and objectives in consultation with team members • Monitor on-site movement of material to ensure intended flow is achieved • Review work order and clarify with appropriate personnel
Self-management	<ul style="list-style-type: none"> • Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with customers • Follow safe workplace procedures for dealing with environmental incidents, accidents and emergencies within scope of responsibilities • Integrate care for the environment into all day-to-day activities
Learning	<ul style="list-style-type: none"> • Establish opportunities for professional development in consultation with appropriate personnel according to organisational procedures • Practise and record emergency and evacuation procedures in the event of an emergency • Record and report information regarding learning and competency development according to organisational requirements • Support the team to identify and resolve problems impeding its performance
Technology	<ul style="list-style-type: none"> • Select equipment appropriate to work requirements and check for operational effectiveness according to manufacturer's recommendations, which may include moisture meters and lifting equipment for the movement of materials

Packaging Rules

Total number of units = 13

- 6 core units plus
- 7 elective units, consisting of:
 - 2 units from Group A
 - up to 5 units from Group A and/or Group B
 - up to 3 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the wood panel products sector of the industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOR3202B	Conduct quality and product care procedures
	FPICOR3204B	Visually assess materials

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Logyard and/or Material Preparation	FPICOT2225B	Chip or flake wood
	FPICOT3203B	Weigh loads
	FPICOT3227B	Receive and measure logs
	FPICOT3253A	Convert timber residue into products for further use
	FPICOT3264	Build and maintain timber stacks

Grading and Testing	FPICOT3229B	Mechanically stress grade panels
	FPICOT3245B	Grade, sort and mark material
	FPICOT3250A	Prepare timber to meet import/export compliance requirements
	FPIWPP3229B	Classify flake
Board/Veneer Production	FPICOT3206B	Cut material using high speed optimiser
	FPICOT3234B	Cut material using CNC sizing machines
	FPICOT3235B	Machine material using CNC machining and processing centres
	FPICOT3249A	Select timber preservation techniques
	FPISAW3226B	Saw logs using CNC optimising systems
	FPIWPP2201B	Cut panels
	FPIWPP3201B	Produce veneer from debarked logs
	FPIWPP3204B	Form board
	FPIWPP3205B	Match and join veneer
	FPIWPP3207B	Clip veneer
	FPIWPP3211B	Maintain caul plates and screens
	FPIWPP3213B	Heat treat material
	FPIWPP3216B	Press material using the daylight process
	FPIWPP3217B	Process production effluent
	FPIWPP3218B	Plan and coordinate machining of panels
	FPIWPP3219B	Blend and test binding mixes
	FPIWPP3221B	Trim new panels to size
	FPIWPP3223B	Immunise veneer

	FPIWPP3226B	Operate a continuous press
	FPIWPP3230B	Produce decorative veneers
	FPIWPP3231B	Produce veneer from prepared flitches
Lamination and Finishing	FPICOT3228B	Plane/sand panels
	FPIWPP3202B	Paint panels
	FPIWPP3206B	Laminate and veneer board surfaces
	FPIWPP3208B	Punch peg holes in panels
	FPIWPP3209B	Prepare resin and additives
	FPIWPP3210B	Laminate board
	FPIWPP3214B	Treat paper
	FPIWPP3215B	Cut paper
	FPIWPP3220B	Plan and coordinate panel painting
	FPIWPP3222B	Press laminated ply
	FPIWPP3224B	Profile sand products
	FPIWPP3225B	Produce profile sanding shoes and wheels
	FPIWPP3227B	Vacuum paint
Timber Drying and Treatment	FPICOT3231B	Operate steam boiler
	FPICOT3232B	Operate heat plant
	FPICOT3248A	Dry timber in solar assisted kilns
	FPIWPP3212B	Dry material
	FPIWPP3228B	Dry wood flakes
Timber Products	FPICOT2241	Apply wood and timber product knowledge

Woodchipping	FPIWPP3203B	Produce fibre from chips
Sawdoctoring	FPICOT3212B	Replace saws, blades and guides
	FPICOT3216B	Assess and maintain saw performance
	FPICOT3217B	Assess and maintain cutter performance

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Machinery and Equipment	FPICOT2240	Cut material with a pole saw
	FPICOT3224B	Plan and monitor equipment maintenance
	FPICOT3233B	Sharpen and align blades and knives
	MEM18011C	Shut down and isolate machines/equipment
Warehousing & Distribution	FPICOT3230B	Operate automated stacking equipment
	FPICOT3236B	Coordinate stock control procedures
	TLIA3018A	Organise despatch operations
Load Handling	RIIMPO323A	Conduct civil construction dozer operations
	TLID3011A	Conduct specialised forklift operations
	TLID2012A	Operate specialised load shifting equipment
	TLID3014A	Load and unload vehicles carrying special loads
	TLID3043A	Shift loads using gantry equipment
Safety and Quality	CPPSEC3007A	Maintain security of environment
	FPICOR3203B	Evaluate fire potential and prevention

Processes	FPICOT3254A	Implement environmentally sustainable work practices in the work area/work site
	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA311A	Apply first aid
	HLTFA412A	Apply advanced first aid (unit has HLTFA311A Apply first aid as a pre-requisite)
	AHCCHM303A	Prepare and apply chemicals
	TLID3035A	Operate a boom type elevating work platform
	TLIF1002B	Conduct housekeeping activities
Administration and Business	BSBINM301A	Organise workplace information
	BSBITU306A	Design and produce business documents
Communication and Relationships	BSBFLM303C	Contribute to effective workplace relationships
Competitive Manufacturing	MSS402001A	Apply competitive systems and practices
	MSS402060A	Use planning software systems in operations
	MSS404060A	Facilitate the use of planning software systems in a work area or team
Planning and Analysis	BSBFLM305C	Support operational plan

FPI30511 Certificate III in Timber Manufactured Products

Modification History

Release 2

Three new units added to elective bank:

- FPICOT2241
- FPICOT3263
- FPICOT3264

Imported units updated to non-equivalent versions:

- HLTFA311A replaces HLTFA301C – Not equivalent
- HLTFA412A replaces HLTFA402C – Not equivalent
- MSS402060A replaces MSACMT260A – Not equivalent
- MSS404060A replaces MSACMT460A – Not equivalent

Release 1.1

Two imported units of competency updated:

- SIRXSLS201 replaces SIRXSLS001A - Equivalent
- MSS402001A replaces MSACMS200A - Equivalent

Typographical error corrected - TLIC3036A was incorrectly entered as TLIC3063A

Description

This qualification is designed for job roles in the timber manufactured products sector of the forest and forest products industry.

Pathways Information

This qualification has five employment pathways for typical operational environments of timber manufactured products. These are:

- Press Operator
- Jig Setter
- Machine Operator (e.g. Finger Jointing, Moulding, Planing)
- Saw Operator
- Timber Manufactured Products Technician

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Accurately record and report workplace information, and maintain documentation • Gather, receive and respond to verbal and written instructions with correct actions • Record and report quality and product care procedures in accordance with workplace procedures • Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> • Contribute to team outcomes • Effectively communicate and work safely with others in the work area • Encourage and support team members to take responsibility for their own work and to assist each other in undertaking required roles and responsibilities • Support team members in meeting expected outcomes

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Problem-solving	<ul style="list-style-type: none"> • Address issues, concerns and problems identified by team members or refer to relevant persons as required • Identify and resolve problems • Record and report assessment outcomes and distribution problems in accordance with workplace procedures • Visually evaluate material characteristics for defects and quality
Initiative and enterprise	<ul style="list-style-type: none"> • Efficiently and safely conduct quality and product care procedures • Monitor quality of output and follow product care procedures • Provide feedback to team members to encourage, value and reward team members' efforts and contributions • Reject and dispose of sub-standard materials in accordance with site requirements
Planning and organising	<ul style="list-style-type: none"> • Efficiently conduct quality and product care procedures in accordance with environmental legislation and workplace procedures • Identify team purpose, roles, responsibilities, goals, plans and objectives in consultation with team members • Monitor on-site movement of material to ensure intended flow is achieved • Review work order and clarify with appropriate personnel
Self-management	<ul style="list-style-type: none"> • Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with clients/customers • Follow safe workplace procedures for dealing with environmental incidents, accidents, and emergencies within scope of responsibilities • Integrate care for the environment into all day-to-day activities
Learning	<ul style="list-style-type: none"> • Establish opportunities for professional development in consultation with appropriate personnel in accordance with organisational procedures • Practise and record emergency and evacuation procedures in the event of an emergency • Record and report information regarding learning and competency development in accordance with organisational requirements • Support the team to identify and resolve problems which impede its performance

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Technology

- Select equipment appropriate to work requirements and check for operational effectiveness in accordance with manufacturer's recommendations - equipment may include moisture meters and lifting equipment for the movement of materials

Packaging Rules

Total number of units = 13

- 6 core units plus
- 7 elective units, consisting of:
 - 3 units from Group A
 - up to 4 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the timber manufactured products sector of the industry

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOR3202B	Conduct quality and product care procedures
	FPICOR3204B	Visually assess materials

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Sawdoctoring	FPICOT3210B	Sharpen cutting tools
	FPICOT3211B	Maintain sawdoctoring tools
	FPICOT3212B	Replace saws, blades and guides
	FPICOT3216B	Assess and maintain saw performance
	FPICOT3217B	Assess and maintain cutter performance
	FPICOT3244B	Cut material to profile
Timber Grading & Testing	FPICOT3208B	Test strength of joints
	FPICOT3240B	Grade heavy structural/engineered products
	FPICOT3246B	Test heavy structural/engineered products
	FPICOT3250A	Prepare timber to meet import/export compliance requirements
Trusses & Frames	FPICOT3204B	Prepare and interpret sketches and drawings
	FPICOT3214B	Take off material quantities
	FPICOT3218B	Quote and interpret from manufactured timber product plans
	FPICOT3219B	Produce standard truss or frame plans and details using computers
	FPICOT3220B	Quote and interpret from computerised timber manufactured product plans
	FPICOT3239B	Create drawings using computer aided design systems
	FPICOT3241B	Assemble timber wall frames
	FPICOT3242B	Lay up timber roof trusses
FPICOT3243B	Operate a truss press	

Timber Products	FPICOT3205B	Dress boards using multi-headed machines
	FPICOT3206B	Cut material using high speed optimiser
	FPICOT3207B	Set up, operate and maintain finger jointing operations
	FPICOT3209B	Set up, operate and maintain end matching operations
	FPICOT3228B	Plane/sand panels
	FPICOT3230B	Operate automated stacking equipment
	FPICOT3234B	Cut material using CNC sizing machines
	FPICOT3235B	Machine material using CNC machining and processing centres
	FPICOT3253A	Convert timber residue into products for further use
	FPISAW3226B	Saw logs using CNC optimising systems
	FPITMM3201B	Convert timber
	FPITMM3202B	Manufacture using joinery machines
	FPIWPP3203B	Produce fibre from chips
	FPIWPP3209B	Prepare resin and additives

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Machinery & Equipment	TLIC3004A	Drive heavy rigid vehicle
	TLIC3005A	Drive heavy combination vehicle
Warehousing & Distribution	FPICOT3236B	Coordinate stock control procedures
	TLIA3018A	Organise despatch operations

Load Handling	FPICOT3264	Build and maintain timber stacks
	TLIC3063A	Operate vehicle carrying special loads
	TLID3011A	Conduct specialised forklift operations
	TLID2012A	Operate specialised load shifting equipment
	TLID3014A	Load and unload vehicles carrying special loads
	TLID3043A	Shift loads using gantry equipment
Safety & Quality Processes	FPICOR3203B	Evaluate fire potential and prevention
	FPICOT3254A	Implement environmentally sustainable work practices in the work area/work site
	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA311A	Apply first aid
	HLTFA412A	Apply advanced first aid (unit has HLTFA311A Apply first aid as a pre-requisite)
	TLID3035A	Operate a boom type elevating work platform
Administration & Business	BSBADM311A	Maintain business resources
	BSBINM301A	Organise workplace information
	BSBITU306A	Design and produce business documents
	FPICOT2241	Apply wood and timber product knowledge
	FPITMM3203B	Estimate and cost job
	SIRXSL201	Sell products and services
Communication & Relationships	BSBFLM303C	Contribute to effective workplace relationships
Competitive	MSS402001A	Apply competitive systems and practices

Manufacturing	MSS402060A	Use planning software systems in operations
	MSS404060A	Facilitate the use of planning software systems in a work area or team
Planning & Analysis	BSBFLM305C	Support operational plan

FPI30611 Certificate III in Timber Merchandising

Modification History

Release 2

Three new units added to elective bank:

- FPICOT2241
- FPICOT3263
- FPICOT3264

Updated imported unit HLTF412A replaces HLTF402C – Not equivalent

Imported units updates to current release:

- SIRRRPK010A
- SIRXFIN003A
- SIRXINV002A
- SIRXRSK002A
- SIRXRSK003A

Release 1.1

Twelve imported units of competency updated:

- SIRRRPK214 replaces SIRRRPK014A - Equivalent
- SIRXSLS303 replaces SIRXSLS004A - Equivalent
- SIRXICT303 replaces SIRXICT003A - Equivalent
- SIRXMER303 replaces SIRXMER002A - Equivalent
- SIRXMER406 replaces SIRXMER003A - Equivalent
- SIRXMER202 replaces SIRXMER005A - Equivalent
- SIRXWHS302 replaces SIRXOHS002A - Equivalent
- SIRXSLS304 replaces SIRXSLS003A - Equivalent
- HLTF403C replaces HLTF403A - Equivalent
- HLTF402C replaces HLTF402B - Equivalent
- ICAICT308A replaces ICAU3126B - Equivalent
- BSBCMM301B replaces BSBCMM301A - Equivalent

Due to a typographical error, TLIC4006A was included in this qualification. It has been updated to TLIC3005A which is the correct unit.

Description

This qualification is designed for job roles in the timber merchandising of the forest and forest products industry.

Pathways Information

This qualification has five employment pathways for typical operational environments of timber merchandising. These are:

- Customer Service / Sales Assistant (Retail or Wholesale)
- Customer Service Officer
- Sales and Merchandising Team Leader
- Sales and Merchandising Team Leader (Timber Products)
- Timber Advisor

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Accurately record and report workplace information, and maintain documentation • Demonstrate features and benefits of products and services to customer to create a buying environment

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • Provide customers with information in a clear, concise manner • Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> • Actively encourage and support team members to participate in team activities and communication processes, and to take responsibility for their actions • Work collaboratively within a team to meet customers' needs • Establish and maintain communication with others in accordance with safety, health and environmental requirements • Support team members in meeting expected outcomes
Problem-solving	<ul style="list-style-type: none"> • Identify and anticipate possible problems and take action to minimise the effect on customer satisfaction • Identify problems and equipment faults and demonstrate appropriate response procedures • Immediately assess and rectify problems to avoid repetition of lost product • Monitor environmental measures and impact on the environment and take corrective action as required in accordance with workplace procedures
Initiative and enterprise	<ul style="list-style-type: none"> • Detect and assess hazards in the work area and report to appropriate personnel • Locate and assess safety, health and environmental issues and risks in the work area and report to appropriate personnel • Monitor quality of output and follow product care procedures • Provide feedback to team members to encourage, value and reward team members' efforts and contributions
Planning and organising	<ul style="list-style-type: none"> • Assess products for quality and customer specification requirements • Efficiently conduct quality and product care procedures in accordance with environmental legislation and workplace procedures • Identify team purpose, roles, responsibilities, goals, plans and objectives in consultation with team members • Research and apply comparisons between products and services
Self-management	<ul style="list-style-type: none"> • Develop and maintain product knowledge according to store policy and legislative requirements

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> • Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with clients/customers • Follow safe workplace procedures for dealing with environmental incidents, accidents, and emergencies within scope of responsibilities • Integrate care for the environment into all day-to-day activities
Learning	<ul style="list-style-type: none"> • Identify opportunities for professional development • Implement training and operational controls in accordance with workplace procedures - training may include in-house or external training programs or one-on-one supervision, programs that maintain up-to-date knowledge of legislative changes at the local, State and Federal level • Practise and record emergency and evacuation procedures in the event of an emergency • Support the team to identify and resolve problems which impede its performance
Technology	<ul style="list-style-type: none"> • Select and use equipment appropriate to work task requirements in accordance with manufacturer's recommendations - equipment is to include equipment necessary to complete work tasks, and may include telephones or communications equipment, tools, machinery, vehicles, navigational aids, instruments, computers and computer software, printers, facsimile machines and photocopiers • Use a range of communication/electronic equipment

Packaging Rules

Total number of units = 13

- 6 core units plus
- 7 elective units, consisting of:
 - 3 units from Group A
 - up to 4 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the timber merchandising sector of the industry

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOR3202B	Conduct quality and product care procedures
	SIRRRPK214	Recommend specialised products and services
	SIRXSLS303	Build relationships with customers

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Logyard and/or Material Preparation	FPICOT3203B	Weigh loads
	FPICOT3264	Build and maintain timber stacks
Retail	FPICOT2241	Apply wood and timber product knowledge
	FPICOT3251A	Promote the carbon benefits of wood products
	FPITMM3203B	Estimate and cost job
	SIRRRPK010A	Recommend home and home improvement products and services
	SIRXFIN003A	Produce financial reports
	SIRXICT303	Operate retail information technology systems
	SIRXINV002A	Maintain and order stock
	SIRXMER303	Coordinate merchandise presentation
SIRXMER406	Monitor in-store visual merchandising display	

	SIRXMER202	Plan, create and maintain displays
	SIRXWHS302	Maintain store safety
	SIRXRSK002A	Maintain store security
	SIRXRSK003A	Apply store security systems and procedures
	SIRXSLS304	Coordinate sales performance
Grading & Testing	FPICOR3204B	Visually assess materials
	FPICOT3240B	Grade heavy structural/engineered products
	FPICOT3246B	Test heavy structural/engineered products
	FPICOT3250A	Prepare timber to meet import/export compliance requirements
Timber Products	FPICOT3204B	Prepare and interpret sketches and drawings
	FPICOT3218B	Quote and interpret from manufactured timber product plans
Warehousing & Distribution	FPICOT3236B	Coordinate stock control procedures
	TLIA3018A	Organise despatch operations

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Machinery & Equipment	TLIC3004A	Drive heavy rigid vehicle
	TLIC3005A	Drive heavy combination vehicle
	TLID3011A	Conduct specialised forklift operations
	TLID3014A	Load and unload vehicles carrying special loads

Safety & Quality Processes	FPICOT3254A	Implement environmentally sustainable work practices in the work area/work site
	FPICOT3263	Maintain and contribute to energy efficiency
	HLTFA403C	Manage first aid in the workplace
	TLID3035A	Operate a boom type elevating work platform
	HLTFA412A	Apply advanced first aid (unit has (unit has HLTFA311A Apply first aid as a prerequisite)
Administration & Business	BSBFIA301A	Maintain financial records
	BSBINM301A	Organise workplace information
	BSBITU306A	Design and produce business documents
	ICAICT308A	Use advanced features of computer applications
Communication & Relationships	BSBCMM301B	Process customer complaints
	BSBFLM303C	Contribute to effective workplace relationships
Planning & Analysis	BSBFLM305C	Support operational plan
	BSBINN201A	Contribute to workplace innovation

FPI30711 Certificate III in Sawdoctoring

Modification History

Release 2

New unit added to elective bank:

- FPICOT3263

Release 1.1

One imported unit of competency updated:

- MEM05006C replaces MEM05006B - Equivalent

Description

This qualification is designed for job roles in the sawmilling and processing sector of the forest and forest products industry.

Pathways Information

This qualification has three employment pathways for typical operational environments of sawmilling and processing. These are:

- Saw Maker
- Saw Repairer
- Sawdoctor

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Accurately interpret and convey information in written, sketch or oral form • Establish and maintain communication with others in accordance with occupational health and safety requirements • Record and report sketch and drawing preparation and interpretation activities to the appropriate personnel • Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> • Communicate effectively and work safely with others in the work area • Contribute to team outcomes • Encourage and support team members to take responsibility for their own work and to assist each other in undertaking required roles and responsibilities • Review and clarify work order with appropriate personnel, which may include supervisors, suppliers, clients, colleagues and managers
Problem-solving	<ul style="list-style-type: none"> • Assess and control risks • Identify and resolve problems including methods for identifying omissions or areas of insufficient detail in sketches and drawings • Identify problems and equipment faults and demonstrate appropriate response procedures • Immediately assess and rectify problems to avoid repetition of damage to blades
Initiative and enterprise	<ul style="list-style-type: none"> • Detect and assess hazards in the work area and report to appropriate personnel • Effectively identify omissions and areas of insufficient detail and demonstrate appropriate response procedures • Encourage team members to participate in the planning, decision making and operational aspects of the work team to their level of responsibility

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> • Visually inspect products before processing or completion
Planning and organising	<ul style="list-style-type: none"> • Check and conform with product specifications • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for preparing and interpreting sketches and drawings • Prepare for maintenance • Review and accurately identify work requirements
Self-management	<ul style="list-style-type: none"> • Apply, follow and adhere to quality system procedures to personal work • Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with clients/customers • Follow safe workplace procedures for dealing with environmental incidents, accidents, and emergencies within scope of responsibilities • Integrate care for the environment into all day-to-day activities
Learning	<ul style="list-style-type: none"> • Identify opportunities for professional development • Implement training and operational controls in accordance with workplace procedures - training may include in-house or external training programs or one-on-one supervision, programs that maintain up-to-date knowledge of legislative changes at the local, State and federal level • Practise and record emergency and evacuation procedures in the event of an emergency • Support the team to identify and resolve problems which impede its performance
Technology	<ul style="list-style-type: none"> • Accurately identify and interpret sketches or drawing features to provide a three-dimensional picture of components, assemblies or structures - sketches or drawings may be computer assisted, free hand or completed with simple drawing instruments • Use and maintain relevant tools, machinery and equipment • Use computerised design where appropriate

Packaging Rules

Total number of units = 26

- 10 core units plus

- 16 elective units, consisting of:
 - up to 16 units from the elective units listed below
 - up to 2 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the sawdoctoring sector of the industry

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOT3204B	Prepare and interpret sketches and drawings
	FPICOT3211B	Maintain sawdoctoring tools
	FPICOT3233B	Sharpen and align blades and knives
	FPICOT3247B	Select timber for forestry operations
	FPISAW3228B	Apply principles of blade design to sawing procedures
	MEM05006C	Perform brazing and/or silver soldering

ELECTIVE UNITS

Field	Unit Code	Unit Title
Sawdoctoring	FPICOT3201B	Hand sharpen knives and blades
	FPICOT3210B	Sharpen cutting tools
	FPICOT3212B	Replace saws, blades and guides
	FPICOT3213B	Manufacture cutting tools

FPICOT3215B	Swage and shape saw blades
FPICOT3216B	Assess and maintain saw performance
FPICOT3217B	Assess and maintain cutter performance
FPICOT3237B	Produce templates
FPICOT3263	Maintain and contribute to energy efficiency
FPISAW3207B	Sharpen band saws
FPISAW3208B	Sharpen circular saws
FPISAW3209B	Align sawing production systems
FPISAW3210B	File and set saws
FPISAW3211B	Recondition guides
FPISAW3212B	Sharpen tipped circular saws
FPISAW3213B	Level and tension circular saws
FPISAW3214B	Join band saw blades
FPISAW3217B	Hard face saw teeth
FPISAW3218B	Replace tungsten tips
FPISAW3219B	Replace stellite tips
FPISAW3220C	Maintain wide band saw blades
FPISAW3221B	Profile saw blanks
FPISAW3222B	Recondition band mill wheels
FPISAW3225B	Maintain frame saw blades
MEM05004C	Perform routine oxyacetylene welding
MEM05049B	Perform routine gas tungsten arc welding
MEM05050B	Perform routine gas metal arc welding

FPI30811 Certificate III in Woodmachining

Modification History

Release 2

New unit added to Group B elective bank:

- FPICOT3263

Release 1.1

Due to a previous typographical error, BSBWOR204A has been moved from the Timber Grading & Testing field to the Administration & Business field.

Description

This qualification is designed for job roles in the sawmilling and processing sector of the forest and forest products industry.

Pathways Information

This qualification has one employment pathway for typical operational environments of sawmilling and processing. These are:

- Wood Machinist

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Communicate information from line manager/management to the team • Establish and maintain communication with others in accordance with occupational health and safety requirements • Record and report quality and product care procedures in accordance with workplace procedures • Use appropriate communication and interpersonal techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> • Actively encourage and support team members to participate in team activities and communication processes and to take responsibility for their actions • Contribute to team outcomes • Make constructive contributions to the group • Support team members in meeting expected outcomes
Problem-solving	<ul style="list-style-type: none"> • Address issues, concerns and problems identified by team members or refer to relevant persons as required • Effectively carry out pre start-up checks • Identify problems and equipment faults and demonstrate appropriate response procedures • Plan product recovery to optimise the resource value and minimise waste
Initiative and enterprise	<ul style="list-style-type: none"> • Encourage team members to participate in the planning, decision making and operational aspects of the work team to their level of responsibility • Identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures • Locate, assess and report safety, health and environment issues and risks in the work area to appropriate personnel • Provide feedback to team members to encourage, value and reward team members' efforts and contributions
Planning and organising	<ul style="list-style-type: none"> • Accurately locate, record and report information • Check and conform with product specifications • Comply with legislation, regulations, standards, codes of

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<p>practice and established safe practices and procedures for selecting blades for sawing procedures</p> <ul style="list-style-type: none"> Identify and assess organisational environmental goals
Self-management	<ul style="list-style-type: none"> Apply, follow and adhere to quality system procedures to personal work Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with clients/customers Follow safe workplace procedures for dealing with environmental incidents, accidents, and emergencies within scope of responsibilities Integrate care for the environment into all day-to-day activities
Learning	<ul style="list-style-type: none"> Implement training and operational controls in accordance with workplace procedures - training may include in-house or external training programs or one-on-one supervision, programs that maintain up-to-date knowledge of legislative changes at the local, State and federal level Practise and record emergency and evacuation procedures in the event of an emergency Record and report information regarding learning and competency development in accordance with organisational requirements Support the team to identify and resolve problems which impede its performance
Technology	<ul style="list-style-type: none"> Record and report safety, health and environmental procedures in accordance with workplace procedures - may be manual, using a computer-based system or another appropriate organisational communication system Safely and efficiently use relevant equipment to complete work tasks within designated timeframes

Packaging Rules

Total number of units = 27

- 9 core units plus
- 18 elective units, consisting of:
 - 13 units from Group A
 - up to 5 units from Group B

- up to 2 units recommended for packaging at Certificate II, III or IV level from this or any other endorsed Training Package or state/territory accredited course.
- Elective units must be relevant to work undertaken in the woodmachining sector of the industry

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBFLM312C	Contribute to team effectiveness
	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOR3202B	Conduct quality and product care procedures
	FPICOT3201B	Hand sharpen knives and blades
	FPICOT3204B	Prepare and interpret sketches and drawings
	FPICOT3247B	Select timber for forestry operations
	FPISAW3228B	Apply principles of blade design to sawing procedures

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Sawing Operations	FPICOT2207B	Dress boards and timber
	FPICOT2208B	Resaw boards and timber
	FPICOT3205B	Dress boards using multi-headed machines
	FPICOT3206B	Cut material using high speed optimiser
	FPICOT3207B	Set up, operate and maintain finger jointing operations
	FPICOT3209B	Set up, operate and maintain end matching operations
	FPICOT3214B	Take off material quantities

	FPICOT3239B	Create drawings using computer aided design systems
	FPICOT3244B	Cut material to profile
	FPITMM2202B	Machine material
	FPITMM3202B	Manufacture using joinery machines
Sawdoctoring	FPICOT3210B	Sharpen cutting tools
	FPICOT3212B	Replace saws, blades and guides
	FPICOT3213B	Manufacture cutting tools
	FPICOT3216B	Assess and maintain saw performance
	FPICOT3217B	Assess and maintain cutter performance
	FPICOT3233B	Sharpen and align blades and knives
	FPICOT3237B	Produce templates
	FPISAW3208B	Sharpen circular saws
	FPISAW3210B	File and set saws
	FPISAW3213B	Level and tension circular saws
	FPISAW3218B	Replace tungsten tips

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Sawing Operations	FPICOT2205B	Tail out materials
	FPICOT2219B	Use hand-held tools
	FPICOT2232B	Cut material to shape using a saw
	FPICOT3234B	Cut material using CNC sizing machines
	FPICOT3235B	Machine material using CNC machining and processing centres
	FPISAW3226B	Saw logs using CNC optimising systems

FPITMM3201B Convert timber

FPIWPP2210B Cut panels to profile

**Timber
Products**

FPICOT2224B Band edges of panels

FPITMM4203B Install and commission CNC software

**Safety and
quality
processes**

FPICOT3263 Maintain and contribute to energy efficiency

Select a maximum of 2 of the following:

**Timber
Grading &
Testing**

FPICOT2212B Grade hardwood sawn and milled products

FPICOT2213B Grade softwood sawn and milled products

FPICOT2214B Grade cypress sawn and milled products

FPICOT2215B Visually stress grade hardwood

FPICOT2216B Visually stress grade softwood

FPICOT2217B Visually stress grade cypress

**Administration
& Business**

BSBWOR204A Use business technology

FPITMM3203B Estimate and cost job

FPI30911 Certificate III in Timber Truss and Frame Design and Manufacture

Modification History

Release 2

Two new units added to elective bank:

- FPICOT3263
- FPICOT3264

Imported non-equivalent units updated:

- CPCCCM1015A replaces CPCCCM1005A – Not equivalent
- HLTFA311A replaces HLTFA301C – Not equivalent
- HLTFA412A replaces HLTFA402C – Not equivalent

Release 1.1

Five imported units of competency updated:

- BSBCUS301B replaces BSBCUS301A - Equivalent
- BSBCUS402B replaces BSBCUS402A - Equivalent
- MSS402001A replaces MSACMS200A - Equivalent
- MSS403032A replaces MSACMT432A - Equivalent
- MSS403051A replaces MSACMT451A - Equivalent

Description

Qualification Notes

Specialised Job Roles

RTO please note: Insert specialisation (job role) on certificate only if the industry recommended electives listed below are achieved

Industry strongly recommends the selection of particular electives to meet different job roles

Designer

Recommended electives for those working in design are:

- 1 unit from Group A plus
- 5 units from Group A or B plus
- 2 units from Group A, B or C or up to 2 relevant units may be selected from units recommended for packaging at Certificate II, Certificate III or Certificate IV in any endorsed Training Package or State/Territory accredited course

Production fabricator Recommended electives for those working in production are:

- 6 units from Group A, B or C plus
- 2 units from Group A, B or C or up to 2 relevant units may be selected from units recommended for packaging at Certificate II, Certificate III or Certificate IV in any endorsed Training Package or State/Territory accredited course

Pathways Information

This qualification has two employment pathways for typical operational environments of timber truss and frame design. These are:

- Designer (Timber Truss & Frame)
- Production Fabricator (Timber Truss & Frame)

Pathways advice

There is an entry requirement into FPI40411 Certificate IV in Timber Truss and Frame Design. For those seeking a pathway to this qualification, recommended elective units are:

FPICOT3204B	Prepare and interpret sketches and drawings
FPICOT3214B	Take off material quantities
FPICOT3218B	Quote and interpret from manufactured timber product plans
FPICOT3220B	Quote and interpret from computerised timber manufactured product plans
FPICOT3239B	Create drawings using computer aided design systems

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Communicate with management • Gather, convey and receive information • Convey instructions accurately • Establish and maintain communication with others
Teamwork	<ul style="list-style-type: none"> • Contribute to the effectiveness of the work team • Participate in and facilitate the work team • Make constructive contributions to the work team
Problem-solving	<ul style="list-style-type: none"> • Solve routine problems • Detect, assess and report hazards in the work area • Review and report factors affecting the achievement of work tasks to appropriate personnel
Initiative and enterprise	<ul style="list-style-type: none"> • Select equipment appropriate to work task • Grade materials to best 'end use' • Identify and assess organisational environmental goals
Planning and organising	<ul style="list-style-type: none"> • Plan potential of materials to provide the highest value added return • Plan product recovery to optimise resource value and minimise waste • Prepare products for despatch
Self-management	<ul style="list-style-type: none"> • Utilise own contribution to the work team • Check own role and responsibilities with appropriate personnel • Identify and prioritise work tasks within designated timeframes
Learning	<ul style="list-style-type: none"> • Identify opportunities for professional development • Actively seek feedback on performance • Seek appropriate support to assist and improve own performance
Technology	<ul style="list-style-type: none"> • Use relevant equipment • Maintain and adjust machinery and equipment

Packaging Rules

Total number of units = 13

- 5 core units plus
- 8 Elective units, with at least 6 from the list below. Up to 2 relevant units may be selected from units recommended for packaging at Certificate II, Certificate III or Certificate IV in any endorsed Training Package or State/Territory accredited course

Elective units must be relevant to work undertaken in the timber truss and frame design sector of the industry

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR2201B	Work effectively in the forest and forest products industry
	FPICOR2202B	Communicate and interact effectively in the workplace
	FPICOR3201B	Implement safety, health and environment policies and procedures
	FPICOR3202B	Conduct quality and product care procedures
	BSBFLM312C	Contribute to team effectiveness

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Specialist Design units. (one unit from this group must be selected to pursue a design pathway at Cert IV)	FPITMM3204A	Interpret designs to prepare timber roof truss drawings and documents using computers
	FPITMM3205A	Interpret designs to prepare timber floor system drawings and documents using computers
	FPITMM3206A	Interpret designs to prepare timber wall frame drawings and documents using computers

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Forest	FPICOT3204B	Prepare and interpret sketches and drawings
	FPICOT3214B	Take off material quantities
	FPICOT3218B	Quote and interpret from manufactured timber product plans
	FPICOT3220B	Quote and interpret from computerised timber manufactured product plans
	FPICOT3239B	Create drawings using computer aided design systems
	FPICOT4202B	Design timber structures
Construction	CPCBC4001A	Apply building codes and standards to the construction process for low rise building projects

GROUP C ELECTIVE UNITS

Field	Unit Code	Unit Title
Forest	FPICOR3204B	Visually assess materials
	FPICOT2235A	Assess timber for manufacturing potential
	FPICOT3234B	Cut material using CNC sizing machines
	FPICOT3235B	Machine material using CNC machining and processing centres
	FPICOT3236B	Coordinate stock control procedures
	FPICOT3241B	Assemble timber wall frames
	FPICOT3242B	Lay up timber roof trusses
	FPICOT3243B	Operate a truss press
	FPICOT3264	Build and maintain timber stacks
	FPICOT4203B	Plan and coordinate product assembly

	FPICOT4204B	Schedule and coordinate load shifting
	FPITMM2203A	Read and interpret timber truss, floor and/or frame fabrication plans
	FPITMM3207A	Set up timber floor trusses
Business	BSBCUS301B	Deliver and monitor a service to customers
	BSBCUS402B	Address customer needs
	BSBFLM305C	Support operational plan
	BSBINM301A	Organise workplace information
Construction	CPCCBBC4014A	Prepare simple building sketches and drawings
	CPCCCM1015A	Carry out measurements and calculations
Health and Safety	HLTFA311A	Apply first aid
	HLTFA412C	Apply advanced first aid (unit has HLTFA311A Apply first aid as a prerequisite)
Manufacturing	FPICOT3263	Maintain and contribute to energy efficiency
	MSS402001A	Apply competitive systems and practices
	MSS403032A	Analyse manual handling processes
	MSS403051A	Mistake proof an operational process
	MSAPMSUP390A	Use structured problem solving tools
Training	TAEDEL301A	Provide work skill instruction
Transport	TLIA3018A	Organise despatch operations

FPI40111 Certificate IV in Forest Operations

Modification History

Release 2

Imported units added to Group B elective bank:

- MSS015011A
- MSS405070A

Native and imported units updated to current versions:

- BSBPMG416A replaces BSBPMG408A – Not equivalent
- FPIFGM4203C replaces FPIFGM4203B – Equivalent
- HLTFA311A replaces HLTFA301C – Not equivalent
- HLTFA412A replaces HLTFA402C – Not equivalent
- SITTPPD402 replaces SITTPPD005A – Equivalent

Imported units updated to current release:

- PSPGOV602B
- PUALAW002B

Release 1.1

Seven imported units of competency updated:

- HLTFA403C replaces HLTFA403A - Equivalent
- BSBITS401B replaces BSBITS401A - Equivalent
- BSBCUS401B replaces BSBCUS401A - Equivalent
- TAEASS401B replaces TAEASS401A - Equivalent
- TAEASS402B replaces TAEASS402A - Equivalent
- TAEASS403B replaces TAEASS403A - Equivalent
- BSBWOR301B replaces BSBWOR301A - Equivalent

Description

This qualification is designed for job roles in the forest operations sector of the forest and forest products industry.

Pathways Information

This qualification has eight employment pathways for typical forest operations environments. These are:

- Arboriculture Supervisor

- Farm Forestry Supervisor
- Forestry Supervisor
- Forestry Operations Supervisor
- Harvesting Supervisor
- Harvesting Team Leader
- Propagation and Stand Health Supervisor
- Tree Farm Supervisor

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit’s parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
<p>The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.</p>	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Give and receive feedback constructively • Establish and maintain communication with others in accordance with forestry operation requirements • Record and report forestry operation procedures in accordance with workplace procedures • Use appropriate communication and interpersonal

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	techniques with colleagues and others
Teamwork	<ul style="list-style-type: none"> • Collect feedback on performance of team members from relevant sources and compare with established team learning needs • Make plans to introduce change in consultation with appropriate personnel • Provide workplace learning opportunities and coaching and mentoring assistance to facilitate individual and team achievement of competencies • Report potential of fire to appropriate personnel
Problem-solving	<ul style="list-style-type: none"> • Control and monitor fire risks and hazards in accordance with workplace procedures • Identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures • Immediately assess and rectify problems to avoid repetition of lost product • Monitor safe workplace procedures and safe work instructions for controlling risks and protecting the environment
Initiative and enterprise	<ul style="list-style-type: none"> • Coordinate product visual inspection before processing or completion • Record and review improvement recommendations for resourcing requirements • Review operational plans and site practices for potential improvement, modifications and time savings • Use feedback from individuals or teams to identify and implement improvements in future learning arrangements
Planning and organising	<ul style="list-style-type: none"> • Identify and comply with applicable occupational health and safety, legislative and organisational requirements relevant to monitoring safety, health and environmental policies and procedures • Monitor organisation of duties, equipment and materials in accordance with safety, health and environmental requirements and organisational procedures • Plan potential of materials to provide the highest value added return • Plan product recovery to optimise the resource value and minimise waste
Self-management	<ul style="list-style-type: none"> • Apply, monitor and coordinate quality system procedures to personal work • Monitor care for the environment to check for integration into all day-to-day activities

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • Monitor safe workplace procedures for dealing with environmental incidents, accidents and emergencies within scope of responsibilities • Use and maintain personal protective equipment and clothing
Learning	<ul style="list-style-type: none"> • Identify and implement learning opportunities for others • Identify learning and development program goals and objectives to match specific knowledge and skill requirements of competency standards • Monitor training and operational controls to be in accordance with workplace procedures - training may include in-house or external training programs or one-on-one supervision • Systematically identify and implement learning and development needs in line with organisational requirements
Technology	<ul style="list-style-type: none"> • Select equipment appropriate to potential work requirements and check for operational effectiveness in accordance with manufacturer's recommendations • Use and maintain relevant tools, machinery and equipment

Packaging Rules

Total number of units = 14

- 5 core units plus
- 9 elective units, consisting of:
 - 2 units from Group A
 - up to 7 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate III, IV or Diploma level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the forest operations sectors of the industry, including forest growing and management and harvesting and haulage.

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBLED401A	Develop teams and individuals

FPICOR3203B	Evaluate fire potential and prevention
FPICOR4201B	Monitor safety, health and environment policies and procedures
FPICOR4202B	Monitor and review forestry operations
FPICOR4203B	Monitor quality and product care procedures

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Fire Control	PUAFIR406B	Develop prescribed burning plans (unit has PUAFIR303B Suppress wildfire as a prerequisite)
	PUAFIR407B	Conduct prescribed burning (unit has PUAFIR303B Suppress wildfire as a prerequisite)
	PUAOPE001B	Supervise response
Breeding & Propagation	AHCNSY402A	Plan a propagation program
Site Establishment & Maintenance	AHCNAR402A	Plan the implementation of revegetation works
	AHCILM401A	Protect places of cultural significance
	AHCIRG406A	Plan on-site irrigation system installation and construction work
	FPIFGM4201B	Implement a forest establishment plan
	FPIFGM4207B	Conduct a forest site assessment
	FPIFGM4208B	Plan a quarry
	FPIFGM4209B	Interpret and use aerial photographs for forest management
	PSPGOV521A	Collect statistical data

Tree Growing & Maintenance	AHCCHM402A	Plan and implement a chemical use program
	AHCPMG402A	Develop a pest management action plan within a local area
	FPIFGM4202B	Manage stand health
	FPIFGM4203C	Design plantations
	FPIFGM4204B	Conduct a pests and diseases assessment
	FPIFGM4205B	Monitor regeneration rates
	FPIFGM4206B	Conduct a wood volume and yield assessment
Harvesting Operations	FPIHAR4201B	Apply tree jacking techniques
	FPIHAR4202B	Coordinate log recovery (hook tender)
	FPIHAR4203B	Design log landings and snig tracks
	FPIHAR4204B	Plan and coordinate fire salvage operations
	FPIHAR4205B	Implement harvesting plans
Machinery & Equipment	AHCMOM402A	Supervise maintenance of machinery and equipment

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Safety & Quality Processes	BSBMGT403A	Implement continuous improvement
	BSBRSK401A	Identify risk and apply risk management processes
	HLTFA311A	Apply first aid
	HLTFA412A	Apply advanced first aid (unit has HLTFA311A Apply first aid as a prerequisite)
	HLTFA403C	Manage first aid in the workplace (to be assessed in conjunction with or after HLTFA412A)

	PUALAW002B	Conduct initial investigation at incident scene
	TLIF4007A	Implement and coordinate accident-emergency procedures
	MSS015011A	Conduct a sustainability energy audit
	MSS405070A	Develop and manage sustainable energy practices
Administration & Business	BSBINM401A	Implement workplace information system
	BSBITS401B	Maintain business technology
	BSBPMG416A	Apply project procurement procedures
	BSBWRT401A	Write complex documents
	FPIFGM4210B	Prepare a tender
	TLIR4002A	Source goods/services and evaluate contractors
Communication & Relationships	BSBCUS401B	Coordinate implementation of customer service strategies
	BSBWOR401A	Establish effective workplace relationships
	BSBWOR402A	Promote team effectiveness
	PUACOM012B	Liaise with media at a local level
	SITTPPD402	Develop interpretive activities
Training & Assessment	BSBCMM401A	Make a presentation
	TAEASS401B	Plan assessment activities and processes
	TAEASS402B	Assess competence
	TAEASS403B	Participate in assessment validation
	TAEDEL301A	Provide work skill instruction
	TAEDEL401A	Plan, organise and deliver group-based learning

- TAEDES401A Design and develop learning programs
- TAEDES402A Use training packages and accredited courses to meet client needs

**Planning &
Analysis**

- BSBMGT402A Implement operational plan
- BSBRES401A Analyse and present research information
- BSBSMB404A Undertake small business planning
- BSBWOR301B Organise personal work priorities and development

FPI40211 Certificate IV in Timber Processing

Modification History

Release 2

Imported units added to Group B elective bank

- MSS015011A
- MSS405070A

Updated non-equivalent imported unit:

- BSBPMG416A replaces BSBPMG408A – Not equivalent
- HLTFA412A replaces HLTFA402C (co-requisite unit to HLTFA403C)– Not equivalent

Imported units updated to current release:

- PSPGOV602B
- LGACOM409A

Release 1.1

Ten imported units of competency updated:

- SIRXSLS406 replaces SIRXSLS005A - Equivalent
- MSS403010A replaces MSACMC410A - Equivalent
- MSS403001A replaces MSACMS400A - Equivalent
- HLTFA403C replaces HLTFA403A - Equivalent
- BSBCUS401B replaces BSBCUS401A - Equivalent
- BSBITS401B replaces BSBITS401A - Equivalent
- TAEASS401B replaces TAEASS401A - Equivalent
- TAEASS402B replaces TAEASS402A - Equivalent
- TAEASS403B replaces TAEASS403A - Equivalent
- BSBWOR301B replaces BSBWOR301A - Equivalent

Description

This qualification is designed for job roles in the timber processing sector of the forest and forest products industry.

Pathways Information

This qualification has seven employment pathways for typical operational environments of timber processing. These are:

- Customer Service Manager (Wholesale)
- Sawmill Supervisor

- Production Supervisor
- Treatment Plant Supervisor
- Timber Advisor Supervisor
- Timber Manufacturing Supervisor
- Timber Supervisor (Wholesale)

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Accurately record and report workplace information, and maintain documentation • Give and receive feedback constructively • Establish and maintain communication with others in accordance with forestry operation requirements • Record and report safety, health and environmental procedures in accordance with workplace procedures

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Teamwork	<ul style="list-style-type: none"> • Collect feedback on performance of team members from relevant sources and compare with established team learning needs • Encourage individuals to self evaluate performance and identify areas for improvement • Facilitate participation of individuals in the work of the team • Provide support to colleagues through coaching and mentoring skills
Problem-solving	<ul style="list-style-type: none"> • Identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures • Immediately assess and rectify problems to avoid repetition of lost product • Monitor and assess safety, health and environmental issues and risks in the work area and report to appropriate personnel • Monitor safe workplace procedures and safe work instructions for controlling risks and protecting the environment
Initiative and enterprise	<ul style="list-style-type: none"> • Coordinate product visual inspection before processing or completion • Monitor and assess hazards in the work area and report to designated personnel • Monitor and check environmental measures for corrective action • Monitor safe workplace procedures for dealing with environmental incidents, accidents, and emergencies within scope of responsibilities
Planning and organising	<ul style="list-style-type: none"> • Efficiently and safely monitor quality and product supply care • Monitor organisation of duties, equipment and materials in accordance with safety, health and environmental requirements and organisational procedures • Plan potential of materials to provide the highest value added return • Plan product recovery to optimise the resource value and minimise waste
Self-management	<ul style="list-style-type: none"> • Apply, monitor and coordinate quality system procedures to personal work • Monitor care for the environment to check for integration into all day-to-day activities • Monitor safe workplace procedures for dealing with environmental incidents, accidents and emergencies within

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	scope of responsibilities <ul style="list-style-type: none"> • Use and maintain personal protective equipment and clothing
Learning	<ul style="list-style-type: none"> • Identify and implement learning opportunities for others • Identify learning and development program goals and objectives to match specific knowledge and skill requirements of competency standards • Monitor training and operational controls to be in accordance with workplace procedures - training may include in-house or external training programs or one-on-one supervision • Systematically identify and implement learning and development needs in line with organisational requirements
Technology	<ul style="list-style-type: none"> • Use and maintain relevant tools, machinery and equipment

Packaging Rules

Packaging Rules

Total number of units = 14

- 3 core units plus
- 11 elective units, consisting of:
 - 3 units from Group A
 - up to 8 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate III, IV or Diploma level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the timber processing and production sectors of the industry, including sawmilling and processing, wood panel products, timber manufactured products and timber merchandising

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBLED401A	Develop teams and individuals
	FPICOR4201B	Monitor safety, health and environment policies and procedures

FPICOR4203B Monitor quality and product care procedures

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Logyard and/or Material Preparation	FPICOT4205B	Coordinate log debarking operations
Sawing Operations	FPISAW4202B	Plan and monitor saw log operations
	FPISAW4204B	Plan and monitor board conversion
Sawdoctoring	FPICOT3216B	Assess and maintain saw performance
	FPICOT3217B	Assess and maintain cutter performance
Timber Treatment & Drying	FPICOT4206B	Plan and coordinate boiler operations
	FPICOT4207B	Plan and coordinate heat plant operations
	FPISAW4201B	Plan and monitor timber treatment plant operations
	FPISAW4203B	Coordinate timber drying operations
Grading & Testing	FPITMM4204B	Sample and test products to specifications
	FPIWPP4202B	Perform laboratory testing
	PSPGOV521A	Collect statistical data
Board & Veneer Production	FPIWPP4201B	Plan and coordinate panel production

Trusses & Frames	FPICOT4201B	Produce complex truss and frame plans and details using computers
	FPICOT4202B	Design timber structures
Timber Products	FPICOT4203B	Plan and coordinate product assembly
	FPITMM4201B	Construct prototypes and samples
	FPITMM4202B	Diagnose and calculate production costs
	FPITMM4203B	Install and commission CNC software
Retail	SIRXINV004A	Buy merchandise
	SIRXMER004A	Manage merchandise and store presentation
	SIRXSLS406	Manage sales and service delivery
	TLIR4002A	Source goods/services and evaluate contractors
Machinery & Equipment	AHCMOM402A	Supervise maintenance of machinery and equipment
	TLIC4006A	Drive multi-combination vehicle
Competitive Manufacturing	MSS403010A	Facilitate change in an organisation implementing competitive systems and practices
	MSS403001A	Implement competitive systems and practices

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Load Handling	FPICOT4204B	Schedule and coordinate load shifting
	TLID4032A	Plan and conduct specialised lift

Safety & Quality Processes	BSBRK401A	Identify risk and apply risk management processes
	BSBMGT403A	Implement continuous improvement
	HLTFA403C	Manage first aid in the workplace (to be assessed in conjunction with or after HLTFA412A Apply advanced first aid)
	TLIF4007A	Implement and coordinate accident-emergency procedures
	MSS015011A	Conduct a sustainability energy audit
	MSS405070A	Develop and manage sustainable energy practices
Administration & Business	BSBCUS401B	Coordinate implementation of customer service strategies
	BSBINM401A	Implement workplace information system
	BSBITS401B	Maintain business technology
	BSBPMG416A	Apply project procurement procedures
	BSBSMB406A	Manage small business finances
	BSBWOR401A	Establish effective workplace relationships
	BSBWOR402A	Promote team effectiveness
	BSBWRT401A	Write complex documents
	LGACOM409A	Prepare tender documentation
Training & Assessment	BSBCMM401A	Make a presentation
	TAEASS401B	Plan assessment activities and processes
	TAEASS402B	Assess competence
	TAEASS403B	Participate in assessment validation
	TAEDEL301A	Provide work skill instruction
	TAEDEL401A	Plan, organise and deliver group-based learning

TAEDEL402A Plan, organise and facilitate learning in the workplace

TAEDES401A Design and develop learning programs

TAEDES402A Use training packages and accredited courses to meet client needs

**Planning &
Analysis**

BSBMGT402A Implement operational plan

BSBRES401A Analyse and present research information

BSBSMB404A Undertake small business planning

BSBWOR301B Organise personal work priorities and development

FPI40311 Certificate IV in Timber Truss and Frame Manufacture

Modification History

Release 2

Imported units added to elective bank:

- MSS015011A
- MSS405070A

Imported units updated to current versions:

- BSBPMG415A replaces BSBPMG407A – Not equivalent
- BSBPMG522A replaces BSBPMG510A – Equivalent
- CPCCA3006B replaces CPCCA3006A – Equivalent
- HLTFA412A replaces HLTFA402C – Not equivalent
- MSS404050A replaces MSACMT450A – Equivalent, new prerequisite unit
- MSS404060A replaces MSACMT460A – Not equivalent

Release 1.1

Eleven imported units of competency updated:

- BSBCUS401B replaces BSBCUS401A - Equivalent
- BSBCUS501C replaces BSBCUS501B - Equivalent
- BSBITS401B replaces BSBITS401A - Equivalent
- CUVDES405A replaces CUVDSP15B - Equivalent
- HLTFA403C replaces HLTFA403A - Equivalent
- MSS403010A replaces MSACMC410A - Equivalent
- MSS403001A replaces MSACMS400A - Equivalent
- MSS402050A replaces MSACMT250A - Equivalent
- MSS404082A replaces MSACMT482A - Equivalent
- TAEASS401B replaces TAEASS401A - Equivalent
- TAEASS402B replaces TAEASS402A - Equivalent

Description

This qualification is designed for job roles in the timber truss and frame sector of the forest and forest products industry.

Pathways Information

This qualification has one employment pathway for typical operational environments of timber truss and frame. This is:

- Production Supervisor (Timber Truss & Frame)

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Record and report quality and product care procedures Interact appropriately with colleagues and others in the workplace Use culturally appropriate communication skills
Teamwork	<ul style="list-style-type: none"> Facilitate the development of the workgroup Determine team development needs
Problem-solving	<ul style="list-style-type: none"> Identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures Assess and rectify problems to avoid loss of product Identify and implement improvements in learning arrangements
Initiative and enterprise	<ul style="list-style-type: none"> Identify resources and timelines required for learning activities Conduct progress reviews Monitor material grading for best end use
Planning and organising	<ul style="list-style-type: none"> Monitor and record organisational environmental goals Plan product recovery to optimise resource value and minimise

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	waste <ul style="list-style-type: none"> • Coordinate and monitor quality of output
Self-management	<ul style="list-style-type: none"> • Monitor tasks in accordance with legislative requirements • Organise duties, equipment and materials in accordance with SHE requirements
Learning	<ul style="list-style-type: none"> • Identify and implement learning and development needs • Provide workplace learning opportunities • Provide coaching and mentoring assistance
Technology	<ul style="list-style-type: none"> • Monitor machinery and equipment maintenance

Packaging Rules

Total number of units = 17

- 3 core units plus
- 14 elective units, consisting of:
 - up to 14 units from the elective units listed below
 - up to 3 units recommended for packaging at Certificate III, IV or Diploma level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the timber processing and production sectors of the industry, including sawmilling and processing, wood panel products, timber manufactured products and timber merchandising

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR4201B	Monitor safety, health and environment policies and procedures
	FPICOR4203B	Monitor quality and product care procedures
	BSBLED401A	Develop teams and individuals

ELECTIVE UNITS

Field	Unit Code	Unit Title
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Forest	FPICOT3239B	Create drawings using computer aided design systems
	FPICOT4202B	Design timber structures
	FPICOT4203B	Plan and coordinate product assembly
	FPITMM4201B	Construct prototypes and samples
	FPITMM4202B	Diagnose and calculate production costs
	FPITMM4203B	Install and commission CNC software
	FPITMM4205A	Prepare and advise on a broad range of timber roof truss details using computers
	FPITMM4206A	Prepare and advise on a broad range of timber floor system details using computers
	FPITMM4207A	Prepare and advise on a broad range of timber wall frame details using computers
Business	BSBCMM401A	Make a presentation
	BSBCUS401B	Coordinate implementation of customer service strategies
	BSBCUS501C	Manage quality customer service
	BSBINM401A	Implement workplace information system
	BSBITS401B	Maintain business technology
	BSBLED501A	Develop a workplace learning environment
	BSBMGT402A	Implement operational plan
	BSBPMG415A	Apply project risk-management techniques
	BSBPMG522A	Undertake project work
Construction	CPCCBBC4001A	Apply building codes and standards to the construction process for low rise building projects
	CPCCBBC4004A	Identify and produce estimated costs for building and construction projects

	CPCBC4005A	Produce labour and material schedules for ordering
	CPCBC4024A	Resolve business disputes
	CPCCA3006B	Erect roof trusses
	CPCSV5010A	Interact with clients in a regulated environment
	CPCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry
	CPCUS4001A	Implement and monitor environmentally sustainable work practices
Visual Arts, Crafts and Design	CUVDES405A	Research and apply techniques in spatial design
Health and Safety	HLTFA403C	Manage first aid in the workplace
	HLTFA412A	Apply advanced first aid
Manufacturing	MSAPMOPS404A	Co-ordinate maintenance
	MSAPMSUP390A	Use structured problem solving tools
	MSS015011A	Conduct a sustainability energy audit
	MSS402050A	Monitor process capability
	MSS403001A	Implement competitive systems and practices
	MSS403010A	Facilitate change in an organisation implementing competitive systems and practices
	MSS404050A	Undertake process capability improvements (*Prerequisite: <i>MSS404052A Apply statistics to operational processes</i>)
	MSS404060A	Facilitate the use of planning software systems in a work area or team
	MSS404082A	Assist in implementing a proactive maintenance strategy

	MSS405070A	Develop and manage sustainable energy practices
Training	TAEASS401B	Plan assessment activities and processes
	TAEASS402B	Assess competence
	TAEDEL401A	Plan, organise and deliver group-based learning
	TAEDEL402A	Plan, organise and facilitate learning in the workplace

FPI40411 Certificate IV in Timber Truss and Frame Design

Modification History

Release 2

Imported units added to Group B elective bank:

- MSS015011A
- MSS405070A

Imported units updated to current versions:

- BSBPMG415A replaces BSBPMG407A – Not equivalent
- BSBPMG522A replaces BSBPMG510A – Equivalent
- CPCCCA3006B replaces CPCCCA3006A – Equivalent
- HLTFA412A replaces HLTFA402C – Not equivalent
- MSS404050A replaces MSACMT450A – Equivalent, new prerequisite unit
- MSS404060A replaces MSACMT460A – Not equivalent

Release 1.1

Ten imported units of competency updated:

- BSBCUS401B replaces BSBCUS401A - Equivalent
- BSBITS401B replaces BSBITS401A - Equivalent
- CUVDES405A replaces CUVDSP15B - Equivalent
- HLTFA403C replaces HLTFA403A - Equivalent
- MSS403010A replaces MSACMC401A - Equivalent
- MSS403001A replaces MSACMS400A - Equivalent
- MSS402050A replaces MSACMT250A - Equivalent
- MSS404082A replaces MSACMT482A - Equivalent
- TAEASS401B replaces TAEASS401A - Equivalent
- TAEASS402B replaces TAEASS402A - Equivalent

Description

This qualification is designed for job roles in the timber processing sector of the forest and forest products industry.

Pathways Information

This qualification has one employment pathway for typical operational environments of timber truss and frame design. This is:

- Designer (Timber Truss & Frame)

Pathways advice

There is an entry requirement into FPI50411 Diploma of Timber Truss and Frame Design. For those seeking a pathway to this qualification, recommended elective units are:

Forest	FPICOT4202B	Design timber structures
	FPITMM4201B	Construct prototypes and samples
Manufacturing	MSAPMSUP390A	Use structured problem solving tools
Construction	CPCCBC4001A	Apply building codes and standards to the construction process for low rise building projects
	CPCSUS4001A	Implement and monitor environmentally sustainable work practices

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements*Entry Requirements*

The entry requirement for this qualification is the successful achievement of the following units contained in FPI30911 Certificate III Timber Truss and Frame Design and Manufacture:

FPICOT3204B Prepare and interpret sketches and drawings

FPICOT3214B Take off material quantities

FPICOT3218B Quote and interpret from manufactured timber product plans

FPICOT3220B Quote and interpret from computerised timber manufactured product plans

FPICOT3239B Create drawings using computer aided design systems

Plus at least one of the following units:

PITMM3204A Interpret designs to prepare timber roof truss drawings and documents using computers

FPITMM3205A Interpret designs to prepare timber floor system drawings and documents using computers

FPITMM3206A Interpret designs to prepare timber wall frame drawings and documents using computers

or demonstration of equivalent competence

Note: The design unit selected will be determined by the industry sector and type of product being manufactured

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Record and report quality and product care procedures Interact appropriately with colleagues and others in the workplace Use culturally appropriate communication skills
Teamwork	<ul style="list-style-type: none"> Facilitate the development of the workgroup Determine team development needs
Problem-solving	<ul style="list-style-type: none"> Identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures Assess and rectify problems to avoid loss of product Identify and implement improvements in learning arrangements
Initiative and enterprise	<ul style="list-style-type: none"> Identify resources and timelines required for learning activities Conduct progress reviews Monitor material grading for best end use
Planning and organising	<ul style="list-style-type: none"> Monitor and record organisational environmental goals Plan product recovery to optimise resource value and minimise waste Coordinate and monitor quality of output
Self-management	<ul style="list-style-type: none"> Monitor tasks in accordance with legislative requirements Organise duties, equipment and materials in accordance with SHE requirements
Learning	<ul style="list-style-type: none"> Identify and implement learning and development needs Provide workplace learning opportunities

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> • Provide coaching and mentoring assistance
Technology	<ul style="list-style-type: none"> • Monitor machinery and equipment maintenance • Identify and verify design inputs • Review and test design options • Prepare truss drawings, production documents and installation instructions and test designs and specifications using custom software

Packaging Rules

Total number of units = 17

- 3 core units plus
- 14 elective units, consisting of:
 - 1 unit from Group A
 - 5 units from Group A and/or Group B
 - up to 8 units from Group A, B or C
 - up to 3 units recommended for packaging at Certificate III, IV or Diploma level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the truss and frame industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBLED401A	Develop teams and individuals
	FPICOR4201B	Monitor safety, health and environment policies and procedures
	FPICOR4203B	Monitor quality and product care procedures

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Forest	FPITMM4205A	Prepare and advise on a broad range of timber roof truss details using computers

FPITMM4206A	Prepare and advise on a broad range of timber floor system details using computers
FPITMM4207A	Prepare and advise on a broad range of timber wall frame details using computers

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Forest	FPICOT4202B	Design timber structures
	FPITMM4201B	Construct prototypes and samples
Business	BSBLED501A	Develop a workplace learning environment
Manufacturing	MSAPMSUP390A	Use structured problem solving tools
	MSS015011A	Conduct a sustainability energy audit
	MSS405070A	Develop and manage sustainable energy practices
Construction	CPCCBC4001A	Apply building codes and standards to the construction process for low rise building projects
	CPCSUS4001A	Implement and monitor environmentally sustainable work practices

GROUP C ELECTIVE UNITS

Field	Unit Code	Unit Title
Forest	FPICOT4203B	Plan and coordinate product assembly
	FPITMM4202B	Diagnose and calculate production costs
	FPITMM4203B	Install and commission CNC software

Business	BSBCMM401A	Make a presentation
	BSBCUS401B	Coordinate implementation of customer service strategies
	BSBINM401A	Implement workplace information system
	BSBITS401B	Maintain business technology
	BSBMGT402A	Implement operational plan
	BSBPMG415A	Apply project risk-management techniques
	BSBPMG522A	Undertake project work
Construction	CPCCBBC4004A	Identify and produce estimated costs for building and construction projects
	CPCCBBC4005A	Produce labour and material schedules for ordering
	CPCCBBC4024A	Resolve business disputes
	CPCCCA3006B	Erect roof trusses
	CPCCSV5010A	Interact with clients in a regulated environment
	CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry
Visual Arts, Crafts and Design	CUVDES405A	Research and apply techniques in spatial design
Health and Safety	HLTFA403C	Manage first aid in the workplace
	HLTFA412A	Apply advanced first aid (unit has HLTFA311A Apply first aid as a prerequisite)
Manufacturing	MSS403010A	Facilitate change in an organisation implementing competitive systems and practices

	MSS403001A	Implement competitive systems and practices
	MSS402050A	Monitor process capability
	MSS404050A	Undertake process capability improvements (*Prerequisite <i>MSS404052A Apply statistics to operational processes</i>)
	MSS404060A	Facilitate the use of planning software systems in a work area or team
	MSS404082A	Assist in implementing a proactive maintenance strategy
	MSAPMOPS404A	Co-ordinate maintenance
Training	TAEASS401B	Plan assessment activities and processes
	TAEASS402B	Assess competence
	TAEDEL401A	Plan, organise and deliver group-based learning
	TAEDEL402A	Plan, organise and facilitate learning in the workplace

FPI50111 Diploma of Forest and Forest Products

Modification History

Release 2

Updated equivalent imported core unit:

- BSBWHS503A Contribute to the systematic management of WHS risk replaces BSBOHS504B Apply principles of OHS risk management

Imported units added to Group B elective bank:

- MSS015011A
- MSS405070A

Native and imported units updated to equivalent versions:

- BSBPMG522A replaces BSBPMG510A
- FPICOT5206B replaces FPICOT5206A
- FPICOT5208B replaces FPICOT5208A
- FPICOT5209B replaces FPICOT5209A
- FPIFGM5219 replaces FPIFGM5218A

Imported units updated to current release:

- LGACOM401A
- LGACOM409A
- LGACOM502B
- LGAEHRR504C
- LGAPLEM404A
- LGAPLEM612B
- PUAFIR501B
- PUAFIR509B
- PUALAW001B
- PUAOPE007B

Release 1.1

Four imported units of competency updated:

- BSBCUS501C replaces BSBCUS501B - Equivalent
- MSS405001A replaces MSACMS600A - Equivalent
- MSS405004A replaces MSACMS603A - Equivalent
- BSBR5K501B replaces BSBR5K501A - Equivalent

Four typographical errors have been fixed - AHCCHM401A, BSBR5K501B, BSBINM501A and BSBFIM501A had incorrectly listed unit titles.

Description

This qualification is designed for job roles in the forest and forest products industry.

Pathways Information

This qualification has twelve employment pathways for typical management environments of forest and forest products industries. These are:

- Arboriculture Manager
- Forest Manager
- Forestry Manager
- Harvesting Manager
- Nursery Manager
- Plantation Establishment Manager
- Plantation Manager
- Production Manager
- Sawmill Manager
- Timber Advisory Manager
- Timber Manufacturing Manager
- Tree Farm Manager

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Adjust and communicate strategies to all stakeholders according to organisational procedures • Communicate information from line manager/management to the team • Consult team members to establish team purpose, roles, responsibilities and accountabilities in accordance with organisational goals, plans and objectives • Manage records, reports and recommendations within the organisation's systems and processes
Teamwork	<ul style="list-style-type: none"> • Develop strategies to ensure that team members are actively encouraged and supported to participate in decision making processes, and to assume responsibility and exercise initiative as appropriate • Ensure leadership, supervision, coaching and mentoring assist colleagues to overcome difficulty in meeting customer service standards • Manage team performance to consistently meet the organisation's quality and delivery standards • Support team members in meeting expected performance outcomes
Problem-solving	<ul style="list-style-type: none"> • Communicate to, and follow up with, line manager/management and other relevant stakeholders, unresolved issues, concerns and problems raised by team members • Develop processes to ensure that issues, concerns and problems identified by team members are recognised and addressed • Take decisions to overcome problems and to adapt customer service and products and/or service delivery in consultation with appropriate individuals and groups • Use problem-solving skills to deal with complex and non-routine difficulties
Initiative and enterprise	<ul style="list-style-type: none"> • Identify and develop new skills to achieve and maintain a competitive edge

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> • Seek and use feedback from employees, clients and colleagues to identify and develop ways to improve competence • Take individual initiative to achieve and extend personal work goals beyond those planned • Take initiative to prioritise and facilitate competing demands to achieve personal, team and the organisation's goals and objectives
Planning and organising	<ul style="list-style-type: none"> • Ensure personal work goals, plans and activities reflect the organisation's plans, and own responsibilities and accountabilities • Ensure personal work planning and organisation serve as a positive role model in the workplace • Investigate, understand and assess the needs of customers and include in planning processes • Prepare action plans, including allocated responsibilities and time frames for implementation
Self-management	<ul style="list-style-type: none"> • Adjust own interpersonal styles and methods to the organisation's social and cultural environment, and guide and support members of the work team in their personal adjustment process • Assess the effectiveness of own management development • Ensure own contribution to work team serves as a role model for others and enhances the organisation's image to all stakeholders • Undertake participation in networks to enhance personal knowledge, skills and work relationships
Learning	<ul style="list-style-type: none"> • Assess personal knowledge and skills against competency standards to determine development needs, priorities and plans • Identify, evaluate, select and use development opportunities suitable to personal learning style/s to develop competence • Manage opportunities for further improvement
Technology	<ul style="list-style-type: none"> • Develop strategies to ensure that systems and procedures including technology are used to monitor operational progress and to identify ways in which planning and operations could be improved • Use technology efficiently and effectively to manage work priorities and commitments

Packaging Rules

Total number of units = 15

- 6 core units plus
- 9 elective units, consisting of:
 - 5 units from Group A
 - up to 4 units from Group A and/or Group B
 - up to 2 units recommended for packaging at Certificate IV, Diploma or Advanced Diploma level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the forest and forest products industry

CORE UNITS

Field	Unit Code	Unit Title
Core	BSBCUS501C	Manage quality customer service
	BSBMGT502B	Manage people performance
	BSBMGT516C	Facilitate continuous improvement
	BSBWHS503A	Contribute to the systematic management of WHS risk
	BSBWOR501B	Manage personal work priorities and professional development
	BSBWOR502B	Ensure team effectiveness

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
Fire Control	PUALAW001B	Protect and preserve incident scene
	PUAOPE001B	Supervise response
	PUAFIR501B	Conduct fire investigation and analysis activities (unit has PUALAW001B Protect and preserve incident scene as a prerequisite)
	PUAFIR509B	Implement prevention strategies
	PUAOPE007B	Command agency personnel within a multi-agency emergency response (unit has PUAOPE001B

		Supervise response as a prerequisite)
Breeding & Propagation	AHCPHT503A	Manage a controlled growing environment
	FPIFGM5212A	Manage genetic resources
	FPIFGM5215A	Breed trees
Site Establishment & Maintenance	AHCIRG503A	Design irrigation, drainage and water treatment systems
	AHCWAT502A	Manage water systems
	FPIFGM5201B	Plan and manage an inventory program
	FPICOT5206B	Implement forestry chain of custody certification system
	FPIFGM5208B	Manage road construction and maintenance
	FPIFGM5214A	Develop a native forest regeneration plan
	FPIFGM5217A	Promote plantations as a sustainable form of land use
	LGAPLEM404A	Prepare and present geographic information systems data
	LGAPLEM612B	Protect heritage and cultural asset
Tree Growing & Maintenance	AHCPGD402A	Plan a plant establishment program
	AHCPMG503A	Develop a strategy for the management of target pests
	AHCNSY401A	Plan a growing-on program
	AHCNSY402A	Plan a propagation program
	AHCWRK505A	Manage trial and/or research material
	FPICOT5205A	Develop biohazard contingency plans
	FPIFGM5210A	Manage tending operations in a native forest
	FPIFGM5211A	Coordinate stand nutrition
	FPIFGM5213A	Coordinate plantation tending operations

	FPIFGM5216A	Manage coupe planning
Harvesting	FPICOT5209B	Manage tree harvesting to minimise environmental impact
	FPIHAR5201B	Design harvesting plans
Timber Products & Processes	FPICOT4201B	Produce complex truss and frame plans and details using computers
	FPICOT4202B	Design timber structures
	FPICOT4204B	Schedule and coordinate load shifting
	FPICOT4205B	Coordinate log debarking operations
	FPICOT4206B	Plan and coordinate boiler operations
	FPICOT4207B	Plan and coordinate heat plant operations
	FPICOT5207A	Implement sustainability in the workplace
	FPIFGM5219	Undertake carbon stock sampling of forests and plantations
	FPISAW4201B	Plan and monitor timber treatment plant operations
	FPISAW4202B	Plan and monitor saw log operations
	FPISAW4203B	Coordinate timber drying operations
	FPISAW4204B	Plan and monitor board conversion
	FPITMM4202B	Diagnose and calculate production costs
	FPITMM4203B	Install and commission CNC software
	FPITMM4204B	Sample and test products to specifications
	FPITMM5201B	Assess product feasibility of designs
	FPITMM5202B	Develop, trial and evaluate prototypes
	FPITMM5203B	Generate and transfer complex computer-aided drawings and specifications

	FPITMM5204B	Manage product design
	FPITMM5205B	Optimise CNC operations
	FPITMM5206B	Plan production
	FPIWPP4201B	Plan and coordinate panel production
	FPIWPP4202B	Perform laboratory testing
Competitive Manufacturing	MSS405001A	Develop competitive systems and practices for an organisation
	MSS405004A	Develop business plans in an organisation implementing competitive systems and practices

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Machinery & Equipment	FPICOT5203B	Manage installation and commissioning of equipment
	FPICOT5204B	Organise enterprise maintenance programs
Safety & Quality Processes	AHCCHM401A	Minimise risks in the use of chemicals
	BSBRK501B	Manage risk
	BSBSUS501A	Develop workplace policy and procedures for sustainability
	FPICOT5201B	Implement sustainable forestry practices
	PUAOPE005B	Manage a multi-team response
	MSS015011A	Conduct a sustainability energy audit
	MSS405070A	Develop and manage sustainable energy practices
Administration & Business	BSBAUD501B	Initiate a quality audit
	BSBFIM501A	Manage budgets and financial plans

	BSBINM501A	Manage an information or knowledge management system
	LGACOM401A	Administer contracts
	LGACOM409A	Prepare tender documentation
Planning & Analysis	BSBINN502A	Build and sustain an innovative work environment
	BSBMGT515A	Manage operational plan
	BSBPMG522A	Undertake project work
	BSBWRK506A	Coordinate research and analysis
	PSPGOV521A	Collect statistical data
Training & Assessment	BSBLED501A	Develop a workplace learning environment
Communication & Relationships	AHCBUS502A	Market products and services
	FPICOT5202B	Manage forestry information and interpretations programs
	FPICOT5208B	Build and maintain community relationships
	LGACOM502B	Devise and conduct community consultations
	LGAEHRR504C	Implement public environmental health education programs

FPI50311 Diploma of Timber Truss and Frame Manufacture

Modification History

Release 2

Updated equivalent imported core unit:

- BSBWHS503A Contribute to the systematic management of WHS risk replaces BSBWHS504B Apply principles of OHS risk management

Imported unit added to elective bank:

- MSS015011A

One imported unit of competency updated:

- MSS405075A replaces MSACMT675A - Equivalent

Release 1.1

Nine imported units of competency updated:

- BSBCUS501C replaces BSBCUS501B - Equivalent
- BSBMGT516C replaces BSBMGT516B - Equivalent
- ICAICT308A replaces ICAU3126B - Equivalent
- MSS405001A replaces MSACMS600A - Equivalent
- MSS405004A replaces MSACMS603A - Equivalent
- MSS402030A replaces MSACMT230A - Equivalent
- MSS404052A replaces MSACMT452A - Equivalent
- MSS405062A replaces MSACMT662A - Equivalent
- MSS405070A replaces MSACMT670A - Equivalent

Description

This qualification is designed for job roles in the timber truss and frame sector of the forest and forest products industry.

Pathways Information

This qualification has one employment pathway for typical operational environments of timber truss and frame. This is:

- Production Manager (Timber Truss & Frame)

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Document performance • Articulate expected standards of performance • Adjust and communicate strategies to stakeholders • Communicate opportunities for improvement
Teamwork	<ul style="list-style-type: none"> • Manage team performance • Counsel individuals who continue to perform below expectations • Involve stakeholders and operational staff in risk management processes
Problem-solving	<ul style="list-style-type: none"> • Make decisions to overcome problems • Deal with complex and non-routine difficulties • Identify potential factors impacting on the effectiveness of controls
Initiative and enterprise	<ul style="list-style-type: none"> • Develop strategies to manage organisational systems • Develop, procure and use resources effectively • Identify factors contributing to risk
Planning and organising	<ul style="list-style-type: none"> • Develop work plans • Consider areas identified for further improvement when undertaking planning

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • Ensure plans achieve agreed specifications
Self-management	<ul style="list-style-type: none"> • Manage own performance and development • Measure and maintain personal performance in varying work conditions • Maintain appropriate work-life balance
Learning	<ul style="list-style-type: none"> • Provide on the job coaching to improve performance • Monitor and coach individuals with poor performance • Lead and manage continuous improvement systems • Conduct formal and informal research
Technology	<ul style="list-style-type: none"> • Source tools to assist in analysing potential hazards • Use technology efficiently and effectively to manage work priorities and commitments

Packaging Rules

Total number of units = 19

- 5 core units plus
- 14 elective units, consisting of:
 - up to 14 units from the elective units listed below
 - up to 3 units recommended for packaging at Certificate IV, Diploma or Advanced Diploma level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the truss and frame industry.

CORE UNITS

Field	Unit Code	Unit Name
Business	BSBCUS501C	Manage quality customer service
	BSBMGT502B	Manage people performance
	BSBMGT516C	Facilitate continuous improvement
	BSBWHS503A	Contribute to the systematic management of WHS risk
	BSBWOR501B	Manage personal work priorities and professional development

ELECTIVE UNITS

Field	Unit Code	Unit Name
Forest	FPICOT5203B	Manage installation and commissioning of equipment
	FPICOT5204B	Organise enterprise maintenance programs
	FPITMM4202B	Diagnose and calculate production costs
	FPITMM5201B	Assess product feasibility of designs
	FPITMM5202B	Develop, trial and evaluate prototypes
	FPITMM5203B	Generate and transfer complex computer-aided drawings and specifications
	FPITMM5204B	Manage product design
	FPITMM5205B	Optimise CNC operations
Information and Communication	FPITMM5206B	Plan production
	ICAICT308A	Use advanced features of computer applications
Construction	CPCCSV5011A	Apply building codes and standards to residential buildings
	CPCCSV5012A	Assess timber-framed designs for one and two storey buildings
	CPCCSV5015A	Assess structural requirements for domestic scale buildings
Business	BSBAUD501B	Initiate a quality audit
	BSBINM501A	Manage an information or knowledge management system
	BSBLED501A	Develop a workplace learning environment

	BSBMGT515A	Manage operational plan
	BSBMKG501B	Identify and evaluate marketing opportunities
	BSBSUS501A	Develop workplace policy and procedures for sustainability
Manufacturing	MSS405001A	Develop competitive systems and practices for an organisation
	MSS405004A	Develop business plans in an organisation implementing competitive systems and practices
	MSS402030A	Apply cost factors to work practices
	MSS404052A	Apply statistics to operational processes
	MSACMT630A	Optimise cost of product
	MSACMT631A	Undertake value analysis of product costs in terms of customer requirements
	MSS405062A	Develop a documentation control strategy for an organisation
	MSS015011A	Conduct a sustainability energy audit
	MSS405070A	Develop and manage sustainable energy practices
	MSS405075A	Facilitate the development of a new product
	MSAPMSUP390A	Use structured problem solving tools

FPI50411 Diploma of Timber Truss and Frame Design

Modification History

Release 1.1

Updated equivalent imported core unit:

- BSBWHS503A Contribute to the systematic management of WHS risk replaces BSOHS504B Apply principles of OHS risk management

Imported unit added to Group B elective bank:

- MSS015011A

One imported unit of competency updated:

- MSS405075A replaces MSACMT675A - Equivalent

Release 1.1

Eight imported units of competency updated:

- BSBCUS501C replaces BSBCUS501B - Equivalent
- BSBMGT516C replaces BSBMGT516B - Equivalent
- MSS405001A replaces MSACMS600A - Equivalent
- MSS405004A replaces MSACMS603A - Equivalent
- MSS402030A replaces MSACMT230A - Equivalent
- MSS404052A replaces MSACMT452A - Equivalent
- MSS405062A replaces MSACMT662A - Equivalent
- MSS405070A replaces MSACMT670A - Equivalent

Description

This qualification is designed for job roles in the timber truss and frame sector of the forest and forest products industry.

Pathways Information

This qualification has one employment pathway for typical operational environments of timber truss and frame. This is:

- Designer (Timber Truss & Frame)

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

Entry Requirements

The entry requirement for this qualification is the successful achievement of the following units contained in FPI40411 Certificate IV Timber Truss and Frame Design:

FPICOT4202B	Design timber structures
FPITMM4201B	Construct prototypes and samples
MSAPMSUP390A	Use structured problem solving tools
CPCCBC4001A	Apply building codes and standards to the construction process for low-rise building projects
CPCSUS4001A	Implement and monitor environmentally sustainable work practices

Plus at least one of the following units:

FPITMM4205A	Prepare and advise on a broad range of timber roof truss details using computers
FPITMM4206A	Prepare and advise on a broad range of timber floor system
FPITMM4207A	Prepare and advise on a broad range of timber wall frame details using computers

or demonstration of equivalent competence

Note: The design unit selected will be determined by the industry sector and type of product being manufactured

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
requirements that may vary depending on the packaging options.	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Document performance • Articulate expected standards of performance • Adjust and communicate strategies to stakeholders • Communicate opportunities for improvement
Teamwork	<ul style="list-style-type: none"> • Manage team performance • Counsel individuals who continue to perform below expectations • Involve stakeholders and operational staff in risk management processes
Problem-solving	<ul style="list-style-type: none"> • Make decisions to overcome problems • Deal with complex and non-routine difficulties • Identify potential factors impacting on the effectiveness of controls
Initiative and enterprise	<ul style="list-style-type: none"> • Develop strategies to manage organisational systems • Develop, procure and use resources effectively • Identify factors contributing to risk
Planning and organising	<ul style="list-style-type: none"> • Develop work plans • Consider areas identified for further improvement when undertaking planning • Ensure plans achieve agreed specifications
Self-management	<ul style="list-style-type: none"> • Manage own performance and development • Measure and maintain personal performance in varying work conditions • Maintain appropriate work-life balance
Learning	<ul style="list-style-type: none"> • Provide on the job coaching to improve performance • Monitor and coach individuals with poor performance • Lead and manage continuous improvement systems • Conduct formal and informal research
Technology	<ul style="list-style-type: none"> • Source tools to assist in analysing potential hazards • Use technology efficiently and effectively to manage work priorities and commitments

Packaging Rules

Total number of units = 19

- 5 core units plus
- 14 elective units, consisting of:
 - 5 units from Group A
 - 6 units from Group B
 - up to 3 units from Group A and/or Group B
 - up to 3 units recommended for packaging at Certificate IV, Diploma or Advanced Diploma level from this or any other endorsed Training Package or state/territory accredited course.

Elective units must be relevant to work undertaken in the truss and frame industry.

CORE UNITS

Field	Unit Code	Unit Name
Business	BSBCUS501C	Manage quality customer service
	BSBMGT502B	Manage people performance
	BSBMGT516C	Facilitate continuous improvement
	BSBWHS503A	Contribute to the systematic management of WHS risk
	BSBWOR501B	Manage personal work priorities and professional development

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Name
Forest	FPITMM5201B	Assess product feasibility of designs
	FPITMM5202B	Develop, trial and evaluate prototypes
	FPITMM5203B	Generate and transfer complex computer-aided drawings and specifications
	FPITMM5204B	Manage product design
Construction	CPCCSV5011A	Apply building codes and standards to residential buildings
	CPCCSV5012A	Assess timber-framed designs for one and two storey buildings

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Name
Forest	FPICOT5203B	Manage installation and commissioning of equipment
	FPICOT5204B	Organise enterprise maintenance programs
	FPITMM4202B	Diagnose and calculate production costs
	FPITMM5205B	Optimise CNC operations
	FPITMM5206B	Plan production
Business	BSBAUD501B	Initiate a quality audit
	BSBINM501A	Manage an information or knowledge management system
	BSBLED501A	Develop a workplace learning environment
	BSBMGT515A	Manage operational plan
	BSBMKG501B	Identify and evaluate marketing opportunities
	BSBSUS501A	Develop workplace policy and procedures for sustainability
Construction	CPCCSV5015A	Assess structural requirements for domestic scale buildings
Manufacturing	MSS405001A	Develop competitive systems and practices for an organisation
	MSS405004A	Develop business plans in an organisation implementing competitive systems and practices
	MSS402030A	Apply cost factors to work practices
	MSS404052A	Apply statistics to operational processes
	MSACMT630A	Optimise cost of product
	MSACMT631A	Undertake value analysis of product costs in terms of customer requirements

MSS405062A	Develop a documentation control strategy for an organisation
MSS015011A	Conduct a sustainability energy audit
MSS405070A	Develop and manage sustainable energy practices
MSS405075A	Facilitate the development of a new product
MSAPMSUP390A	Use structured problem solving tools

FPI60113 Advanced Diploma of Forest Industry Sustainability

Modification History

Release 2

Qualification code updated to FPI60113 in FPI11 Version 2.

Revised qualification packaging rules to further increase flexibility of the qualification.

- Total number of units required to complete the qualification reduced from 14 to 10, with core unit requirement reduced from 3 to 2 and elective unit requirement reduced from 11 to 8; with the number of units required under each elective group also modified
- Renaming of qualification fields and reallocation of units to those fields
- Updates to native and imported elective units of competency, while maintaining equivalence:
 - FPICOT5206A updated to FPICOT5206B
 - FPICOT5208A updated to FPICOT5208B
 - FPICOT5209A updated to FPICOT5209B
 - FPICOT6202A updated to FPICOT6202B
 - FPIFGM5219 replaces FPIFGM5218A
 - FPIFGM6203 replaces FPIFGM6202A
 - FPIFGM6201A updated to FPIFGM6201B
- Addition of imported elective units into leadership field of elective bank:
- BSBMGT616A Develop and implement strategic plans
- BSBPMG414A Apply project information management and communications techniques
- Imported units removed as already covered by existing units:
- PSPGOV521A and BSBPMG510A replaced by BSBPMG414A
- PSPGOV602B replaced by BSBREL701A
- PSPMNGT604B and PSPMNGT703A replaced by BSBMGT608C and BSBINN601B
- The following units no longer relevant to job roles and so removed from qualification:
 - BSBADM502B
 - BSBWOR501B
 - SIRXFIN005A
 - SIRXMER004A
 - SIRXMGT005A

Imported units updated to current release:

- PSPPOL603A
- PSPREG603A
- SIRXFIN004A

Release 1.1

FPICOT5208A and FPICOT6201A returned to Group A, Forestry field as per Case for Endorsement November 2011.

Description

This qualification is designed for supervisory and leadership roles in the forest and forest products industry.

Pathways Information

This qualification has various employment pathways for typical supervisor and management roles within the forest and forest products industry. These are:

- Community Liaison Officer
- Designer (Manufacturing and Engineered Wood Products)
- Environmental Manager
- Environmental Planner
- Forest / Timber Harvester
- Forest Auditor (e.g. certification provider)
- Forest Planner
- Forest Sustainability Manager
- Forestry Manager
- General Manager
- Plantation Manager
- Sustainability Manager
- Technical Forester
- Technical Services Officer
- Technical Services Manager
- Value Recovery Officer

Entry may be gained through progression from a lower level FPI qualification or recognition of existing industry experience or qualifications.

This qualification provides a pathway from VET into higher education and from higher education into VET. An example of a pathway from higher education to VET would be a technical forester, holding a university qualification, gaining leadership and sustainability skills through this Advanced Diploma qualification.

This qualification may be suited to an Australian Apprenticeship pathway.

Licensing/Regulatory Information

Native FPI units may be subject to state or territory licensing, legislative, regulatory or certification requirements.

Some imported units in the elective bank may be subject to state or territory codes, regulations, licences and/or permits. These units must be implemented in line with the licensing requirements outlined in the unit's parent Training Package.

Entry Requirements

There are no entry requirements.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Communicate production schedule for the value maximisation plan • Document recommendations based on research outcomes and provide feedback to appropriate personnel and stakeholders • Interact appropriately with stakeholders, colleagues and others
Teamwork	<ul style="list-style-type: none"> • Consult with stakeholders • Establish timelines and budget for implementation with appropriate personnel • Use consultative processes to obtain input into work in line with site requirements
Problem-solving	<ul style="list-style-type: none"> • Analyse data on enterprise resource consumption • Develop and implement appropriate response procedures • Identify and review work requirements
Initiative and enterprise	<ul style="list-style-type: none"> • Evaluate changing trends and opportunities for improved workplace sustainability and consider for ongoing improvements • Identify market demand
Planning and organising	<ul style="list-style-type: none"> • Coordinate the acquisition of required resources, including obtaining required authorisations and approvals • Develop and implement systems and procedures to assist in the achievement of sustainability in the workplace • Plan the policy design process, including organising meetings

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	with stakeholders
Self-management	<ul style="list-style-type: none"> • Maintain appropriate work-life balance, and ensure stress is effectively managed and health is attended to • Measure and maintain personal performance in varying work conditions, contexts and contingencies • Set and meet own work priorities
Learning	<ul style="list-style-type: none"> • Assess personal knowledge and skills against competency standards to determine development needs, priorities and plans • Identify and develop new skills to achieve and maintain a competitive edge • Identify, evaluate, select and use development opportunities suitable to personal learning style/s to develop competence
Technology	<ul style="list-style-type: none"> • Use software and communication systems to research, analyse, create and present documents and reports • Use technology to manage work priorities and commitments

Packaging Rules

Total number of units = 10

- 2 core units plus
- 8 elective units, of which:
 - 4 units must be from Group A, and
 - up to 4 further units may be from Group A and/or Group B
 - up to 2 units may be chosen from outside this qualification, from this or any other endorsed Training Package or accredited course.

Elective units chosen from outside this qualification must be relevant to work undertaken in supervisory and leadership roles in the forest and forest products industry.

CORE UNITS

Field	Unit Code	Unit Title
Core	FPICOR6201A	Manage sustainability in the workplace
	FPICOR6202A	Implement practices to maximise value from wood residues

GROUP A ELECTIVE UNITS

Field	Unit Code	Unit Title
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Sustainable Industry Practices	FPICOT5201B	Implement sustainable forestry practices
	FPICOT5202B	Manage forestry information and interpretations programs
	FPICOT5205A	Develop biohazard contingency plans
	FPICOT5206B	Implement forestry chain of custody certification system
	FPICOT5207A	Implement sustainability in the workplace
	FPICOT5209B	Manage tree harvesting to minimise environmental impact
	FPICOT6202B	Develop and manage a forestry chain of custody certification process for the workplace
	FPICOT6203A	Develop engineered timber products to meet energy efficient building
	FPICOT6204A	Use carbon accounting to estimate emissions in the workplace
	FPICOT6205A	Prepare an enterprise carbon management report
	FPICOT6207A	Develop forest management systems and processes
	FPIFGM5219	Undertake carbon stock sampling of forests and plantations
	FPIFGM6201B	Plan a biochar storage system for carbon capture and storage
	FPIFGM6203	Manage sustainable tree inventory
	MSS015003A	Analyse product lifecycle for sustainability

GROUP B ELECTIVE UNITS

Field	Unit Code	Unit Title
Leadership	BSBINN601B	Manage organisational change
	BSBINN801A	Lead innovative thinking and practice
	BSBMGT608C	Manage innovation and continuous improvement
	BSBMGT616A	Develop and implement strategic plans
	BSBPMG414A	Apply project information management and

		communications techniques
	BSBREL701A	Develop and cultivate collaborative partnerships and relationships
	FPICOT5208B	Build and maintain community relationships
	FPICOT6201B	Manage community engagement
	FPIFGM5217A	Promote plantations as a sustainable form of land use
Administration and Business	BSBAUD501B	Initiate a quality audit
	BSBFIM501A	Manage budgets and financial plans
	BSBSUS501A	Develop workplace policy and procedures for sustainability
	BSBWRK506A	Coordinate research and analysis
	ICTSUS7235A	Use ICT to improve sustainability outcomes
	MSACMT671A	Develop and manage sustainable environmental practices
	PSPPOL603A	Manage policy implementation
	PSPREG603A	Manage and lead inspection and monitoring programs
	SIRXFIN004A	Manage financial resources

Custom Content Section

Not applicable.

FPISS00011 Skill set for a boom delimeter operator

Modification History

FPI11 V2

Superseded unit updated:

- HLTFA311A replaces HLTFA301C

Pathway qualification code updated to reflect changes made in FPI11 V2

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as a boom delimeter operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a boom delimeter operator.

Skill Set Requirements

Unit	FPICOR2203B Follow environmental care procedures
	FPICOR2205B Follow OHS policies and procedures
	HLTFA311A Apply first aid
	FPIHAR3208C Conduct boom delimeter operations

Target Group

Target group This skill set is for people wishing to work as a boom delimeter operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for
Statement of
Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating a boom delimeter and may meet some State and Territory regulatory requirements for gaining a licence as a boom delimeter operator.

FPISS00012 Skill set for a crawler/dozer operator

Modification History

FPI11 V2

Superseded unit updated:

- HLTF311A replaces HLTF301C

Pathway qualification code updated to reflect changes made in FPI11 V2

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as a crawler/dozer operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway	These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.
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Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a crawler/dozer operator.

Skill Set Requirements

Units	FPICOR2203B Follow environmental care procedures
	FPICOR2205B Follow OHS policies and procedures
	FPIHAR3216A Conduct forestry operations using crawler tractor
	HLTF311A Apply first aid

Target Group

Target group This skill set is for people wishing to work as a crawler/dozer operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Target group This skill set is for people wishing to work as a crawler/dozer operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Units

- FPICOR2203B Follow environmental care procedures
- FPICOR22055 Follow OHS policies and procedures
- FPIHAR3216A Conduct forestry operations using crawler tractor
- HLTFA311A Apply first aid

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a crawler/dozer operator.

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating a crawler/dozer and may meet some State and Territory regulatory requirements for gaining a licence as a crawler/dozer operator in some jurisdictions.

FPISS00013 Skill set for a feller buncher operator

Modification History

FPI11 V2

Superseded unit updated:

- HLTF311A replaces HLTF301C

Pathway qualification code updated to reflect changes made in FPI11 V2

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as a feller buncher operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a feller buncher operator.

Skill Set Requirements

Unit	FPICOR2203B Follow environmental care procedures
	FPICOR2205B Follow OHS policies and procedures
	HLTF311A Apply first aid
	FPIHAR3207C Conduct feller buncher operations

Target Group

Target group This skill set is for people wishing to work as a feller buncher operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for
Statement of
Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating a feller buncher and may meet some State and Territory regulatory requirements for gaining a licence as a feller buncher operator.

FPISS00014 Skill set for a forwarder operator

Modification History

FPI11 V2

Superseded unit updated:

- HLTF311A replaces HLTF301C

Pathway qualification code updated to reflect changes made in FPI11 V2

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as a forwarder operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a forwarder operator.

Skill Set Requirements

Unit	FPICOR2203B Follow environmental care procedures
	FPICOR2205B Follow OHS policies and procedures
	HLTF311A Apply first aid
	FPIHAR3206C Conduct forwarder operations

Target Group

Target group

This skill set is for people wishing to work as a forwarder operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for
Statement of
Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating a forwarder and may meet some State and Territory regulatory requirements for gaining a licence as a forwarder operator.

FPISS00015 Skill set for a heavy production mobile chipper operator

Modification History

FPI11 V2

Superseded units updated:

- HLTF311A replaces HLTF301C
- FPIHAR3215C replaces FPIHAR3215B

Pathway qualification code updated to reflect changes made in FPI11 V2

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as a heavy production mobile chipper operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a heavy production mobile chipper operator.

Skill Set Requirements

Unit	FPICOR2203B Follow environmental care procedures
	FPICOR2205B Follow OHS policies and procedures
	HLTF311A Apply first aid
	FPIHAR3215C Conduct heavy production mobile chipper operations

Target Group

Target group This skill set is for people wishing to work as a heavy production mobile chipper operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for
Statement of
Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating a heavy production mobile chipper and may meet some State and Territory regulatory requirements for gaining a licence as a heavy production mobile chipper operator.

FPISS00016 Skill set for a loader operator

Modification History

FPI11 V2

Superseded unit updated:

- HLTF311A replaces HLTF301C

Pathway qualification code updated to reflect changes made in FPI11 V2

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as a loader operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a loader operator.

Skill Set Requirements

Unit FPICOR2203B Follow environmental care procedures
 FPICOR2205B Follow OHS policies and procedures
 FPIHAR3218A Conduct loader operations
 HLTF311A Apply first aid

Target Group

Target group This skill set is for people wishing to work as a loader operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for
Statement of
Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating a loader and may meet some State and Territory regulatory requirements for gaining a licence as a loader operator.

FPISS00017 Skill set for a mechanical processor operator

Modification History

FPI11 V2

Superseded unit updated:

- HLTF311A replaces HLTF301C
- FPIHAR3210C replaces FPIHAR3210B

Pathway qualification code updated to reflect changes made in FPI11

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as a mechanical processor operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a mechanical processor operator.

Skill Set Requirements

Unit	FPICOR2203B Follow environmental care procedures
	FPICOR2205B Follow OHS policies and procedures
	HLTF311A Apply first aid
	FPIHAR3210C Conduct mechanical processor operations

Target Group

Target group This skill set is for people wishing to work as a mechanical processor operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating a mechanical processor and may meet some State and Territory regulatory requirements for gaining a licence as a mechanical processor operator.

FPISS00018 Skill set for a native forest operator

Modification History

FPI11 V2

Pathway qualification codes updated to reflect changes made in FPI11 V2

FPI11 V1

New skill set

Description

This skill set is for people wishing to work as a Forest or harvesting technical officer in a commercial native forest operation in the harvesting and haulage and forest growing and management sectors of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30113 Certificate III in Forest Growing and Management and FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a forest operator or timber harvesting operator licence.

Skill Set Requirements

FPICOR2205B Follow OHS policies and procedures

FPICOT3256 Apply biodiversity protection principles

FPICOT3257 Follow cultural heritage requirements

FPICOT3258 Comply with soil and water protection

FPICOR2203B Follow environmental care procedures

FPICOT3255 Apply silviculture principles

Target Group

Target group This skill set is for people wishing to work as a Forest or harvesting technical officer in a commercial native forest operation in the harvesting and haulage and forest growing and management sectors of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for These competencies from the FPI11 Forest and Forest Products
Statement of Training Package meet the industry requirements for Native Forest
Attainment Operator.

Custom Content Section

Not applicable.

FPISS00019 Skill set for a plantation forest operator

Modification History

FPI11 V2

Pathway qualification codes updated to reflect changes made in FPI11 V2

FPI11 V1

New skill set

Description

This skill set is for people wishing to work as a Forest or harvesting technical officer in a commercial plantation forest operation in the harvesting and haulage and forest growing and management sectors of the forest and forest products industry.

Pathways Information

These units provide credit towards a number of qualifications including FPI30113 Certificate III in Forest Growing and Management and FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a forest operator or timber harvesting operator licence.

Skill Set Requirements

FPICOR2205B Follow OHS policies and procedures

FPICOT3258 Comply with soil and water protection

FPICOR2203B Follow environmental care procedures

FPICOT3257 Follow cultural heritage requirements

Target Group

This skill set is for people wishing to work as a Forest or harvesting technical officer in a commercial plantation forest operation in the harvesting and haulage and forest growing and management sectors of the forest and forest products industry.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for Plantation Forest Operator.

Custom Content Section

Not applicable.

FPISS00020 Skill set for a single grip harvester operator

Modification History

FPI11 V2

Superseded units updated:

- HLTF311A replaces HLTF301C
- FPIHAR3214C replaces FPIHAR3214B

Pathway qualification code updated to reflect changes made in FPI11 V2

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as a single grip harvester operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a single grip harvester operator.

Skill Set Requirements

Unit	FPICOR2203B Follow environmental care procedures
	FPICOR2205B Follow OHS policies and procedures
	HLTF311A Apply first aid
	FPIHAR3214C Operate a single grip harvester

Target Group

Target group This skill set is for people wishing to work as a single grip harvester operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating a single grip harvester and may meet some State and Territory regulatory requirements for gaining a licence as a single grip harvester operator.

FPISS00021 Skill set for a skidder operator

Modification History

FPI11 V2

Superseded unit updated:

- HLTF311A replaces HLTF301C

Pathway qualification code updated to reflect changes made in FPI11 V2

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as a skidder operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as a skidder operator.

Skill Set Requirements

Unit	FPICOR2203B Follow environmental care procedures
	FPICOR2205B Follow OHS policies and procedures
	FPIHAR3217A Conduct skidder operations
	HLTF311A Apply first aid

Target Group

Target group This skill set is for people wishing to work as a skidder operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for
Statement of
Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating a skidder and may meet some State and Territory regulatory requirements for gaining a licence as a skidder operator in some jurisdictions.

FPISS00022 Skill set for an excavator operator

Modification History

FPI11 V2

Superseded unit updated:

- HLTF311A replaces HLTF301C

Pathway qualification code updated to reflect changes made in FPI11 V2

FPI11 V1

Skill set code updated to FPI11 to reflect Training Package update from FPI05 V3 to FPI11 V1

Description

This skill set is for people wishing to work as an excavator operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions some of these units are required for the issuing of a timber harvesting operator's licence as an excavator operator.

Skill Set Requirements

Unit	FPICOR2203B Follow environmental care procedures
	FPICOR2205B Follow OHS policies and procedures
	FPIHAR3219A Conduct excavator operations with grabs
	HLTF311A Apply first aid

Target Group

Target group This skill set is for people wishing to work as an excavator operator in a commercial forest operation in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

Suggested words for
Statement of
Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for operating an excavator and may meet some State and Territory regulatory requirements for gaining a licence as an excavator operator.

FPISS00023 Skill set for fire salvage operations

Modification History

FPI11 V2

Pathway qualification codes updated to reflect changes made in FPI11 V2

Statement of Attainment updated to reflect 'fire salvage operations'

FPI11 V1

New skill set

Description

Not applicable.

Pathways Information

These units provide credit towards a number of qualifications including FPI30113 Certificate III in Forest Growing and Management and FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

FPICOT3252A use environmental care procedures to undertake fire salvage operations

FPICOR2203B follow environmental care procedures

FPICOR2205B follow OHS policies and procedures

Target Group

This skill set is for people wishing to work as a Forest or harvesting technical officer in a commercial plantation forest operation in the harvesting and haulage and forest growing and management sectors of the forest and forest products industry.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for fire salvage operations.

Custom Content Section

Not applicable.

FPISS00024 Skill set for off road four wheel drive operations

Modification History

FPI11 V2

Pathway qualification codes updated to reflect changes made in FPI11 V2

FPI11 V1

New skill set

Description

This skill set is for forestry undertaking four wheel drive operations on unsealed roads within the harvesting and haulage, forest growing and management and sawmilling sectors of the forest and forest products industry.

Pathways Information

These may provide credit towards a number of qualifications including:

- FPI20113 Certificate II in Forest Growing and Management
- FPI20213 Certificate II in Harvesting and Haulage
- FPI20311 Certificate II in Sawmilling and Processing
- FPI30113 Certificate III in Forest Growing and Management
- FPI30213 Certificate III in Harvesting and Haulage
- FPI30311 Certificate III in Sawmilling and Processing

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

FPIFGM3215 Perform complex four wheel drive operations

FPICOT3259 Operate a four wheel drive on unsealed roads

FPICOT3260 Recover four wheel drive vehicles

FPIFGM3214 Operate a four wheel drive in a towing situation

FPICOT2233B Navigate in forest areas

Target Group

This skill set is for forestry undertaking four wheel drive operations on unsealed roads within the harvesting and haulage, forest growing and management and sawmilling sectors of the forest and forest products industry.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements Off Road Four Wheel Drive Operations.

Custom Content Section

Not applicable.

FPISS00025 Skill set for soil and water protection (roading)

Modification History

FPI11 V2

Pathway qualification codes updated to reflect changes made in FPI11 V2

FPI11 V1

New skill set

Description

Not applicable.

Pathways Information

These units provide credit towards a number of qualifications including FPI30113 Certificate III in Forest Growing and Management and FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

FPICOT3258 Comply with soil and water protection

FPICOR2203B Follow environmental care procedures

AHCSAW302A Implement erosion and sediment control measures

Target Group

This skill set is for forestry workers and people wishing to work in a forest soil and water protection role within a forestry environment.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for Forest Soil and Water Protection.

Custom Content Section

Not applicable.

FPISS00026 Skill set for carbon accounting

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the specialised skills and knowledge required to design plantations, develop a tree inventory, and undertake carbon storage sampling.

Pathways Information

Pathway These units provide credit towards a number of qualifications, including FPI60113 Advanced Diploma of Forest Industry Sustainability

Licensing/Regulatory Information

To be registered as an auditor, candidates need to meet the requirements of the National Greenhouse and Energy Reporting (NGER) guidelines as set out in the National Greenhouse and Energy Reporting Act 2007.

Further information is available at www.cleanenergyregulator.gov.au

Skill Set Requirements

Units FPIFGM4203C Design plantations
FPIFGM5219 Undertake carbon stock sampling of forests and plantations
FPIFGM6203 Manage sustainable tree inventory

Target Group

Target group The skill set is targeted at enterprises and individuals who are providing services to landowners undertaking, or wishing to undertake, farm forestry projects.

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to design plantations, develop a tree inventory, and undertake carbon stock sampling.

Custom Content Section

Not applicable.

FPISS00027 Skill set for a forestry log truck driver

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

Not applicable.

Pathways Information

This skill set provides credit towards a number of qualifications, including FPI30213 Certificate III in Harvesting and Haulage, which allows for specialisation for the role of log truck driver.

Licensing/Regulatory Information

In a number of jurisdictions, some of the units in this skill set are required for the issuing of licences to drive heavy vehicles, which include vehicles required to transport forestry logs from a forestry harvesting site.

Skill Set Requirements

Units FPICOR2203B Follow environmental care procedures
 FPICOR2205B Follow OHS policies and procedures
 FPICOT3261 Transport forestry logs using trucks

Target Group

This skill set is for people wishing to work as a log truck driver in commercial forest operations in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for driving a log truck, as well as knowing the workplace procedures for loading and unloading log trucks. They may meet state and territory licensing

requirements for driving heavy vehicles that transport forestry logs, depending on individual state requirements.

Custom Content Section

Not applicable.

FPISS00028 Skill set for a forestry produce truck driver

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

Not applicable.

Pathways Information

This skill set provides credit towards a number of qualifications, including FPI30213 Certificate III in Harvesting and Haulage.

Licensing/Regulatory Information

In a number of jurisdictions, some of the units in this skill set are required for the issuing of licences to drive heavy vehicles, which include vehicles required to transport forestry produce from a forestry harvesting site.

Skill Set Requirements

Units FPICOR2203B Follow environmental care procedures
FPICOR2205B Follow OHS policies and procedures
FPICOT3262 Transport forestry produce using trucks

Target Group

This skill set is for people wishing to work as a truck driver transporting forestry produce (apart from forestry logs) in commercial forest operations in the harvesting and haulage sector of the forest and forest products industry.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the

industry requirements for driving a heavy vehicle used for the transport of forestry produce. They may meet state and territory licensing requirements for driving heavy vehicles that transport forestry produce, depending on individual state requirements.

Custom Content Section

Not applicable.

FPISS00029 Skill set for a finger jointing plant operator

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

Not applicable.

Pathways Information

These units provide credit towards a number of qualifications, including:

FPI30311 Certificate III in Sawmilling and Processing

FPI30511 Certificate III in Timber Manufactured Products

FPI30811 Certificate III in Wood Machining

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to the units in this skill set; however there are no specific licensing or certification requirements at the time of publication.

Skill Set Requirements

- Units**
- FPICOT2209B Produce finger jointed timber
 - FPICOT3207B Set up, operate and maintain finger jointing operations
 - FPICOT3212B Replace saws, blades and guides
 - MEM18011C Shut down and isolate machines/equipment

Target Group

This skill set is for people who set up, operate and maintain finger jointing operations in a forest products factory setting. Their job role will involve planning production parameters, maintaining and replacing equipment, resolving problems, shutting down and isolating equipment as required to produce finger jointed timber to required specifications.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for setting up, operating and maintaining finger jointing operations to produce finger jointed timber according to established production parameters.

Custom Content Section

Not applicable.

FPISS00030 Skill set for a finger jointing moulder operator

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

Not applicable.

Pathways Information

These units provide credit towards a number of qualifications including:

FPI30311 Certificate III in Sawmilling and Processing

FPI30511 Certificate III in Timber Manufactured Products

FPI30811 Certificate III in Wood Machining

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to the units in this skill set; however there are no specific licensing or certification requirements at the time of publication.

Skill Set Requirements

- Units**
- FPICOR3204B Visually assess materials
 - FPICOT3205B Dress boards using multi-headed machines
 - FPICOT3217B Assess and maintain cutter performance

Target Group

This skill set is for people who assess and maintain cutter performance and dressing boards using multi-headed machines in a forest products factory setting that produces finger jointed timber.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for planning and evaluating dressing conditions and processes to set, adjust and maintain cutters and equipment for finger jointed timber. The competencies also meet industry requirements to inspect and test moulding and planing machines and other associated equipment for moulder operators producing finger jointed timber.

Custom Content Section

Not applicable.

FPISS00031 Skill set for a finger jointing grader operator

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

Not applicable.

Pathways Information

These units provide credit towards a number of qualifications, including:

FPI30311 Certificate III in Sawmilling and Processing

FPI30511 Certificate III in Timber Manufactured Products

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to the units in this skill set; however there are no specific licensing or certification requirements at the time of publication.

Skill Set Requirements

Units FPICOR3204B Visually assess materials
FPICOT2210B Tally material
FPICOT3245B Grade, sort and mark material

Target Group

This skill set is for people who grade, sort and mark material in a forest products factory setting that produces finger jointed timber.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to visually evaluate material characteristics and features for

classification into various strength or appearance grades suitable for the production of finger jointed timber.

Custom Content Section

Not applicable.

FPISS00032 Skill set for a finger jointing quality control tester

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

Not applicable.

Pathways Information

These units provide credit towards a number of qualifications including:

FPI30311 Certificate III in Sawmilling and Processing

FPI30511 Certificate III in Timber Manufactured Products

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to the units in this skill set; however there are no specific licensing or certification requirements at the time of publication.

Skill Set Requirements

Units FPICOR3202B Conduct quality and product care procedures

FPICOR3204B Visually assess materials

FPICOT3208B Test strength of joints

Target Group

This skill set is for people who conduct quality and product care procedures and test strength of joints for finger jointed timber in a forest products factory setting.

Suggested words for Statement of Attainment

These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements for monitoring quality of output and following product care

procedures in the production of finger jointed timber. These competencies also meet industry requirements to interpret test results used in identifying production problems and necessary changes to processes.

Custom Content Section

Not applicable.

FPISS00033 Skill set for forest and wood product innovation for leaders

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the skills and knowledge required by leaders in the forest and wood products industry to guide innovative practice and thinking to create a culture within the industry which enables advancement of business opportunities

Pathways Information

Pathway These units provide credit towards a number of qualifications, including FPI50111 - Diploma of Forest and Forest Products and FPI60113 - Advanced Diploma of Forest Industry Sustainability

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Units BSBINN801A Lead innovative thinking & practice
BSBINN501A Establish systems that support innovation
BSBINN502A Build and sustain an innovative work environment
FPICOT5207A Implement sustainability in the workplace

Target Group

Target group The skill set is targeted at managers operating at a strategic level within an organisation.

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to design plantations, develop a tree inventory, and undertake carbon stock sampling.

Custom Content Section

Not applicable.

FPISS00034 Skill set for forest and wood product innovation for managers

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the skills and knowledge required to implement strategic initiatives and foster continuous improvement within an organisation

Pathways Information

Pathway These units provide credit towards a number of qualifications, including FPI50111 - Diploma of Forest and Forest Products and FPI60113 - Advanced Diploma of Forest Industry Sustainability

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Units BSBMGT608C Manage innovation and continuous improvement
FPICOT5207A Implement sustainability in the workplace
BSBMGT616A Develop and implement strategic plans*

Target Group

Target group The skill set is targeted at managers within enterprises responsible for the implementing of strategic initiatives

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to implement innovative initiatives and continuous improvement within organisations

Custom Content Section

Not applicable.

FPISS00035 Skill set for supporting forest and wood products innovation

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the specialised skills and knowledge required to develop innovative ideas through collaborative processes in the workplace

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Units SIRXQUA001A Develop innovative ideas at work
 BSBCRT402A Collaborate in a creative process

Target Group

Target group The skill set is targeted at enterprises and individuals required to develop innovative ideas through collaborative processes in the workplace

Suggested words for Statement of Attainment

Suggested words for These competencies from the FPI11 Forest and Forest Products
Statement of Training Package meet the industry requirements to develop

Attainment innovative ideas through collaborative processes in the workplace

Custom Content Section

Not applicable.

FPISS00036 Skill set for managing change in the forest and wood products industry

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the specialised skills and knowledge required to manage organisational change to support the strategic direction of the organisation

Pathways Information

Pathway These units provide credit towards a number of qualifications, including FPI50111 - Diploma of Forest and Forest Products and FPI60113 - Advanced Diploma of Forest Industry Sustainability

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Units BSBMGT616A Develop and implement strategic plans
BSBINN601B Manage organisational change
FPICOT6201B Manage community engagement
FPICOT5207A Implement sustainability in the workplace

Target Group

Target group The skill set is targeted at managers in organisations undergoing change whose role involves contributing to and implementing strategic plans.

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to implement strategic plans and sustainability in the workplace and manage organisational change

Custom Content Section

Not applicable.

FPISS00037 Skill set for forest and wood products industry stakeholder engagement

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the skills and knowledge required to build community relationships, management community engagement and collaboration to support innovation.

Pathways Information

Pathway These units provide credit towards a number of qualifications, including FPI50111 - Diploma of Forest and Forest Products and FPI60113 - Advanced Diploma of Forest Industry Sustainability

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Units FPICOT6201B Manage community engagement
FPICOT5208B Build and maintain community relationships
BSBCRT402A Collaborate in a creative process*

Target Group

Target group The skill set is targeted at enterprises and individuals who are responsible for building and maintaining community relationships.

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to build and maintain community relationships and manage ongoing community engagement to support innovation

Custom Content Section

Not applicable.

FPISS00038 Skill set for supporting workplace engagement in the forest and wood products industry

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the specialised skills and knowledge required to support workplace engagement through the implementation of communication techniques and strategies.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Units BSBCMM402A Implement effective communication strategies
 BSBPMG414A Apply project information management and communications techniques

Target Group

Target group The skill set is targeted at enterprises and individuals who are supporting workplace engagement through the implementation of communication techniques and strategies

Suggested words for Statement of Attainment

Suggested words for Statement of These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to support

Attainment workplace engagement through the implementation of communication techniques and strategies.

Custom Content Section

Not applicable.

FPISS00039 Skill set for leading business development in the forest and wood products industry

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the specialised skills and knowledge required to develop and implement plans and establish systems to support innovation in the workplace.

Pathways Information

Pathway These units provide credit towards a number of qualifications including FPI60113 - Advanced Diploma of Forest Industry Sustainability

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Units BSBRES801A Initiate and lead applied research
BSBMGT616A Develop and implement strategic plans
BSBINN501A Establish systems that support innovation

Target Group

Target group The skill set is targeted at enterprise managers who are responsible for developing and implementing plans and establishing systems to support innovation in the workplace.

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to develop and implement plans and establish systems to support innovation in the workplace.

Custom Content Section

Not applicable.

FPISS00040 Skill set for managing business development in the forest and wood products industry

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the specialised skills and knowledge required to manage innovation and continuous improvement in the forest and wood products industry.

Pathways Information

Pathway These units provide credit towards a number of qualifications, including FPI50111 - Diploma of Forest and Forest Products and FPI60113 - Advanced Diploma of Forest Industry Sustainability

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Units BSBMGT608C Manage innovation and continuous improvement
BSBWRK506A Coordinate research and analysis
TLIE4006A Collect, analyse and present workplace data and information

Target Group

Target group The skill set is targeted at managers who manage innovation and continuous improvement

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to manage innovation and continuous improvement of an organisation.

Custom Content Section

Not applicable.

FPISS00041 Skill set for supporting business development in the forest and wood products industry

Modification History

FPI11 V2

Primary release with FPI11 Training Package V2

Description

This skill set provides the specialised skills and knowledge required to undertake research to develop strategies for sustainable use of resources.

Pathways Information

Pathway These units provide credit towards a number of qualifications, including FPI50111 - Diploma of Forest and Forest Products.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Units TLIE4006A Collect, analyse and present workplace data and information
AHCWRK505A Manage trial and/or research material
CHCPOL403C Undertake research activities
MSS015002A Develop strategies for more sustainable use of resources

Target Group

Target group The skill set is targeted at enterprises and individuals to undertake research to develop strategies for sustainable use of resources.

Suggested words for Statement of Attainment

Suggested words for Statement of Attainment These competencies from the FPI11 Forest and Forest Products Training Package meet the industry requirements to undertake research to develop strategies for sustainable use of resources.

Custom Content Section

Not applicable.

FPICOR2201B Work effectively in the forest and forest products industry

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to work effectively in the forest and forest products industry. It requires the ability to identify and follow legal and procedural requirements, complete daily work activities, and identify opportunities for professional development. These work functions would be carried out under routine supervision within organisational guidelines

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR2201A Work effectively in the forest and forest products industry

Application of the Unit

Application of the unit

The unit involves working effectively in the forest and forest products industry in operations of all sizes in a variety of work settings including a forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plant, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council and emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Identify and follow legal and procedural requirements

1.1. Applicable *Occupational Health and Safety* (OHS), *environmental*, *legislative* and *organisational requirements* relevant to working effectively in the forest and forest products industry are identified and followed

1.2. Key legal and procedural principles relating to *work order* are checked with *appropriate personnel* in line with organisational requirements

1.3. Legal and procedural requirements are clarified with appropriate personnel as required to ensure consistency of interpretation and application

1.4. Procedures are followed to ensure applicable legislative and procedural requirements are *ethically* implemented and to required standards

2. Prioritise and

2.1. Own role and responsibilities are checked with

ELEMENT	PERFORMANCE CRITERIA
complete daily work activities	<p>appropriate personnel in line with organisational requirements</p> <p>2.2. Work tasks are identified, prioritised and completed within designated timeframes in line with work order</p> <p>2.3. Factors affecting the achievement of work tasks are promptly reviewed and reported to appropriate personnel</p> <p>2.4. Equipment is selected appropriate to work task requirements and is used in line with manufacturer recommendations</p> <p>2.5. Work is consistent with organisational and legislative requirements related to cultural diversity, access and equity, and equal employment opportunity</p>
3. Identify and access future learning opportunities	<p>3.1. Feedback on performance is actively sought from appropriate personnel to confirm quality of performance and identify areas for improvement</p> <p>3.2. Opportunities for professional development are established in consultation with appropriate personnel in line with organisational procedures</p> <p>3.3. Appropriate support is sought to assist and improve own performance to achieve personal and organisational goals and objectives</p> <p>3.4. Information regarding learning and competency development is recorded and reported in line with organisational requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report workplace information
- Numeracy skills sufficient to estimate, measure and calculate time required to

REQUIRED SKILLS AND KNOWLEDGE

complete a task

- Problem solving skills sufficient to complete work tasks within designated timeframes; establish opportunities for personal professional development; review and accurately identify work requirements

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for working effectively in the forest and forest products industry
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures relevant to working effectively in the forest and forest products industry
- Workplace communication channels, protocols and procedures
- Organisational structure and reporting channels
- Workplace safety and emergency procedures
- Role of forests, forestry and forest products in carbon capture and storage
- Concept of sustainable forest management
- Life cycle of forests and forest products
- Terms and conditions of employment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can work safely and efficiently in the forest and forest products industry

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to working effectively in the forest and forest products industry
- following organisational policies and procedures relevant to working effectively in the forest and forest products industry
- the safe use of relevant equipment to complete work tasks within designated timeframes
- participation in processes to improve professional development

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of

EVIDENCE GUIDE

process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management

RANGE STATEMENT

Environmental requirements may include:

- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine guarding
- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements

RANGE STATEMENT

- Work order** is to include:
- environmental management requirements (waste disposal, recycling and re-use guidelines)
 - instructions from supervisors or management
 - specific client requirements
 - objectives and timeframes
 - work tasks and procedures
 - resource and equipment requirements
 - reporting and documentation requirements
 - personal protective clothing and equipment requirements

and may include:

- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers

Ethically implementing procedures

is to ensure work practices:

- maximise resource use
 - minimise waste, maximise recycling and reduce landfill
 - use energy and materials efficiently
- Factors** may include:
- own competency level
 - limits defined through common law
 - contract law or statutes which apply to the nature of the work being performed
 - limits described in job specifications and organisational policy and procedures
 - competing work demands
 - technology and equipment breakdowns
 - unforeseen incidents
 - workplace hazards
 - risks and controls

RANGE STATEMENT

Equipment is to include:

- impact of work practices on the environment
- non-availability of resources and materials and budget constraints
- equipment necessary to complete work tasks

and may include:

- telephones or communications equipment
- tools
- machinery
- vehicles
- navigational aids
- instruments
- computers and computer software
- printers
- facsimile machines and photocopiers

and is to include:

Feedback may include:

- using this equipment in an environmentally responsible way
- formal or informal performance appraisals
- comments from supervisors
- colleagues or clients
- personal
- reflective behaviour strategies and workplace assessment
- reference to industry and/or organisational areas of interest such as environmental sustainability

Opportunities for professional development may include:

- coaching
- mentoring or supervision
- formal or informal learning programs
- induction programs
- internal or external training provision
- work experience or exchange of opportunities
- personal study
- career planning or development
- performance appraisals

RANGE STATEMENT

- workplace skills assessment
 - recognition of prior learning assessment and recognition of current competencies assessment
 - accessing new approaches/developments (such as social networking sites) to increase awareness of current areas of community concern and industry interest
- Appropriate support** may include:
- mentors
 - coaches
 - supervisors
 - colleagues
- Organisational goals and objectives** may include:
- reporting deadlines
 - team participation
 - team and individual learning goals
 - continuous improvement strategies and OHS requirements
- Records and reports** may be:
- manual
 - using a computer-based system or another appropriate organisational communication system
- Work practices in relation to methods/techniques/tools/equipment** may include:
- preventing and minimising risks
 - improving resource/energy efficiency
 - conserving energy
 - reducing carbon emissions
 - reducing use of non-renewable resources
 - re-using and recycling
 - minimising and reducing waste
 - reducing material consumption
 - eliminating or reducing the use of hazardous and toxic materials
 - reducing chemical use

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR2202B Communicate and interact effectively in the workplace

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to communicate and interact effectively with other workers, including, gathering, conveying and receiving information through verbal and written forms of communication and participating in work relations

General workplace legislative and regulatory requirements may apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR2202A Communicate and interact effectively in the workplace

Application of the Unit

Application of the unit

The unit involves effectively communicating and interacting in the workplace in a variety of work settings, including, a forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plant, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| <p>1. Gather, convey and receive information</p> | <p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to communicating and interacting effectively in the workplace are identified and followed</p> <p>1.2. <i>Verbal and written instructions</i> are gathered, received and responded to with correct actions</p> <p>1.3. Instructions are conveyed accurately using relevant <i>communication modes</i></p> <p>1.4. <i>Work signage</i> is responded to with correct action</p> <p>1.5. Information is conveyed in simple language and messages are acknowledged and checked</p> <p>1.6. Questions are used to gain additional information and to clarify understanding</p> |
| <p>2. Carry out face-to-face routine communication</p> | <p>2.1. Routine instructions and messages are received and followed</p> <p>2.2. Workplace procedures are carried out to company requirements</p> <p>2.3. Information from a range of sources is accessed,</p> |

ELEMENT**PERFORMANCE CRITERIA**

- interpreted* and checked with *appropriate personnel*
- 2.4. Information is selected and *sequenced* correctly
- 2.5. Verbal and written *reporting* is conducted clearly and legibly in line with workplace procedures
3. Apply visual communications
- 3.1. *Visual communications* are used following accepted industry practices and/or social conventions
- 3.2. Attention of the communicating parties is obtained, checked and acknowledged
- 3.3. Intention of visual communications is clarified and checked at each step
- 3.4. Unclear or ambiguous visual communications are questioned or visually cancelled
- 3.5. Instances of unclear visual communications are followed up to avoid repeated problems
4. Participate in simple meeting processes
- 4.1. Correct process for *meetings* is identified and followed in line with pre-determined or agreed procedures
- 4.2. Responses are sought and provided to others in the group
- 4.3. Constructive contributions are made to the group
- 4.4. Goals or outcomes are noted and communicated to appropriate personnel
5. Maintain work relationships
- 5.1. Communication with co-workers is conducted in a courteous manner which reflects sensitivity to individual, *social and cultural differences*
- 5.2. Relevant workplace information is shared with co-workers to achieve designated individual and team, goals and objectives
- 5.3. Assistance is provided to, and sought from, co-workers to achieve work tasks
- 5.4. Contradictions, ambiguity, uncertainty or misunderstandings are identified and clarified with appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant equipment
- Communication skills sufficient to; effectively request information; actively listen; effectively receive and action feedback; effectively relate to people from a range of social, cultural and ethnic backgrounds and varying physical and mental abilities; use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to effectively solve routine problems, review and accurately identify and interpret work requirements

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for effective communication and interaction in the workplace
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures relevant to effective communication and interaction in the workplace
- Basic principles of effective communication
- Basic principles of working relationships
- Differences between written and spoken language
- Organisational standards for the presentation of written information
- Established communication channels and protocols
- Problem identification and resolution strategies
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can communicate and interact effectively in the workplace

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to communicating and interacting effectively in the workplace
- following organisational policies and procedures relevant to communicating and interacting effectively in the workplace
- the ability to receive and relay verbal, non-verbal and written information in a clear, concise and accurate manner
- the use of a range of visual communication signals
- participation in workplace meetings using agreed processes to resolve issues

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE

application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

RANGE STATEMENT

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- job risk assessments
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards

RANGE STATEMENT

- recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Verbal and written instructions** may include:
- graphical instructions
 - signage
 - plans
 - work bulletins
 - charts and hand drawings
 - documents
 - memos
 - maps
 - material safety data sheets (MSDS)
 - diagrams
 - sketches
 - graphics
- Communication modes** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
 - use of telephones (including mobile)
 - email
 - facsimile
 - internet
 - two-way radios
- Work signage** may include:
- site safety signs
 - directional signs
 - traffic signs
 - facility or location signs
 - hazards
- Interpreting information** may
- company procedures
 - regulations

RANGE STATEMENT

include:

- OHS requirements
- induction procedures
- industrial agreements
- checklists
- instructions
- delivery dockets
- MSDS
- workplace policies
- quality requirements
- bulletins
- maps
- work schedules
- emergency procedures
- job risk assessments

Appropriate personnel may include:

- supervisors
- colleagues
- clients

Sequencing information is to include:

- receiving the information and converting it into a logical order of activities

Reporting may include:

- verbal or written communication of work output
- quality outcomes
- hazards
- incidents or equipment malfunctions
- completion of written notes
- simple workplace proformas or documents
- email communication

Visual communications may include:

- eye contact
- hand signals
- electronic signals
- mechanical signals

Meetings may be:

- on or off-site

and are to include:

- tool box meetings
- team meetings
- project meetings
- meetings with land owners
- staff meetings
- industrial meetings

RANGE STATEMENT

Social and cultural differences
may be expressed in:

- language
- traditional practices and observations
- beliefs
- values
- practices
- food
- diet
- dress
- religious and spiritual observances
- social conventions
- cultural stereotypes
- conventions of gender or sexuality

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR2203B Follow environmental care procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to identify, maintain and monitor positive environmental work practices. Competency requires recognition of basic environmental risks and hazards, and the following of OHS, environmental policies and workplace or industry practices with the aim of improving environmental care practices where necessary

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR2203A Follow environmental care procedures

Application of the Unit

Application of the unit

This unit involves following environmental care procedures in a variety of work settings including a forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, forest products factory, forest products sales and service, horticultural, domestic, local council and emergency services environment as applicable to the unit

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Identify environmental care requirements | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>environmental care procedures</i> are identified
1.2. <i>Work order</i> is reviewed and <i>environmental care requirements</i> are identified and clarified with <i>appropriate personnel</i>
1.3. Existing and potential <i>environmental risks and hazards</i> are identified and reported to relevant personnel
1.4. <i>Communication</i> with others about environmental care requirements is established and maintained in line with OHS requirements |
| 2. Ensure work practices follow environmental care requirements | 2.1. Applicable OHS, environmental, legislative and organisational requirements relevant to following <i>environmental care procedures</i> are followed
2.2. Resources used in own work role are selected appropriate to work and environmental care requirements in line with site procedures |

ELEMENT	PERFORMANCE CRITERIA
3. Seek opportunities to improve environmental care practices	<p>2.3.Procedures for dealing with environmental incidents, accidents, and emergencies are followed within scope of own responsibilities</p> <p>3.1.Work plans to <i>improve environmental care practices and resource efficiency</i> are followed</p> <p>3.2.Specific improvements to environmental care practices and resource efficiency are suggested to relevant personnel</p> <p>3.3.Breaches or potential breaches of <i>environmental regulations</i> are reported to relevant personnel in line with workplace procedures</p> <p>3.4.Breaches or potential breaches of environmental care procedures are <i>recorded and reported</i> in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures, review and accurately identify and interpret work requirements

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for environmental care procedures
- Environmental protection requirements
- Organisational and site standards, requirements, policies and procedures relevant to environmental care procedures

REQUIRED SKILLS AND KNOWLEDGE

- Environmental policies and practices, risks and hazards
- Environmental risks and hazard identification
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can follow environmental care procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to following environmental care procedures
- following organisational policies and procedures relevant to following environmental care procedures
- effective communication and safe work practices
- following environmental care procedures in line with environmental legislation and workplace procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than

EVIDENCE GUIDE

confirmatory questions, will usually be conducted in an off-site context

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment

RANGE STATEMENT

- equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - heritage and traditional land owner issues
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Environmental care procedures** may include:
- integrating environmental considerations into everyday duties such as preventing and minimising the production of pollution (discharges to air, land and water, hazardous waste, reducing burning off activities, recycling materials, conservation practices)
 - improving workplace maintenance practices (such as using a broom instead of a hose, using environmental friendly cleaning agents)
- Work order** is to include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Environmental care requirements** may include:
- environmental sustainability
 - protection of water courses and water quality

RANGE STATEMENT

- soil and salinity management
- reduction and disposal of waste
- energy efficiency
- biodiversity and habitat protection
- conservation of natural resources
- fire management

and actions to limit the impact of:

- water pollution
- soil erosion
- land contamination
- noise

and actions to limit the impact to:

- air quality
- supervisors
- safety officers
- suppliers
- clients
- colleagues
- managers
- environmental officers

Appropriate personnel may include:

Environmental risks and hazards may include:

- spills
- leaks
- pollution
- planned and unplanned emissions
- soil compaction
- disturbance and erosion
- accidents
- disposal of waste
- damage or disruption to eco-systems
- displacement of plants or animals
- changes in land use
- fire risks and hazards
- damage to habitats
- illegal vegetation clearing
- seed collection
- firewood gathering
- verbal and non-verbal language
- constructive feedback
- active listening

Communication may include:

RANGE STATEMENT

Improving environmental care practices and resource efficiency may include:

- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Environmental regulations are specified in:

- assessing existing work practices and resource usage
- implementing new policies and procedures
- using resources in new ways
- work orders
- work plans
- relevant policies and procedures

Recording and reporting breaches of environmental care procedures may include:

- referring to OHS policies and procedures
- referring to quality outcomes
- identifying risks and hazards
- identifying incidents or equipment malfunctions

and may be compiled:

Work practices in relation to methods/techniques/tools/equipment may include:

- using a computer-based or other appropriate organisational communication system
- preventing and minimising risks
- improving resource/energy efficiency
- conserving energy
- reducing carbon emissions
- reducing use of non-renewable resources
- re-using and recycling
- minimising and reducing waste
- reducing material consumption
- eliminating or reducing the use of hazardous and toxic materials
- reducing chemical use

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR2204B Follow fire prevention procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to follow fire prevention techniques and procedures during normal work activities. The unit includes implementing basic fire prevention measures

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR2204A Follow fire prevention procedures

Application of the Unit

Application of the unit The unit involves following fire prevention procedures in a variety of work settings including a forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, timber and wood products production, timber and wood products sales and service, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| <p>1. Prepare for fire prevention</p> | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to following fire prevention procedures are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed in the context of <i>fire prevention</i> requirements, checked and clarified with <i>appropriate personnel</i></p> <p>1.3. Existing and potential <i>fire risks and hazards</i> are detected and reported to appropriate personnel</p> <p>1.4. <i>Fire extinguishing equipment</i> is selected appropriate to work requirements and fire prevention in line with site requirements</p> <p>1.5. Workplace procedures, work instructions and legislation for fire prevention practices are followed</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| <p>2. Implement fire prevention activities</p> | <p>2.1. Fire risks and hazards are eliminated or reduced, and reported in accordance with workplace procedures</p> <p>2.2. <i>Signs of fire</i> are recognised and alarm raised at</p> |

ELEMENT**PERFORMANCE CRITERIA**

- appropriate time in line with workplace procedures
- 2.3. Appropriate *fire extinguishing equipment* is selected in line with the nature and type of fire expected, checked and properly stored
- 2.4. *Training and/or professional development is accessed to maintain currency of competence in assessing fires within role and skill to respond to, and in using and/or accessing fire extinguishing equipment*
- 2.5. Appropriate personnel are notified and incident report completed
- 2.6. Fire prevention procedures are *recorded and reported* in line with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to select and use fire extinguishing equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to effectively recognise signs of fire or fire hazards; identify problems and equipment faults and demonstrate appropriate response procedures; review and accurately identify work requirements

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for fire prevention
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for fire prevention
- Environmental risk assessment and hazard identification

REQUIRED SKILLS AND KNOWLEDGE

- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, maintenance and minimisation of carbon emissions
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently follow fire prevention procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- compliance with applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to following fire prevention procedures
- compliance with organisational policies and procedures relevant to following fire prevention procedures
- compliance with applicable licensing or certification requirements
- effective communication and working safely with others
- the ability to follow fire prevention procedures in accordance with environmental legislation and workplace procedures

Context of and specific resources for

- Competency is to be assessed in the workplace or realistically simulated workplace

EVIDENCE GUIDE

assessment

- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment

EVIDENCE GUIDE

task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- hot work permits to be issued by authorised personnel
- protective shields for welding and grinding activities
- written/displayed evacuation procedures
- appropriate fitness for the task
- legislation
- organisational policies and procedures
- workplace practices
- environmental risk assessment and hazard

Environmental requirements may include:

RANGE STATEMENT

identification

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)
- established Emergency Evacuation Committee

Work order is to include:

- instructions for the environmental monitoring of work and procedures, such as:
 - hot work permits
 - procedures to prevent fires

and may include:

- environmental care requirements relevant to the work

RANGE STATEMENT

Fire prevention may include:

- cutting of fire breaks
- clearing of undergrowth
- identifying and using appropriate equipment to cut fire breaks and clear undergrowth
- ensuring equipment is far enough away from combustible materials
- housekeeping to ensure work area is clear of waste
- provision of suitable fire fighting equipment
- undertaking regular evacuation training

Appropriate personnel may include:

- fire wardens
- supervisors
- suppliers
- clients
- colleagues
- managers
- emergency evacuation committee

Fire risks and hazards may include:

- weather conditions which induce fire
- welding or grinding sparks
- dry undergrowth
- unsafe work practices and use of equipment to create fire
- combustible materials such as dry or dead scrub, tall grasses, rubbish, oily rags
- waste material proximity to equipment
- flammable liquids
- inappropriate storing of materials and equipment
- blocked or no access and exit

Fire extinguishing equipment may include:

- extinguishers for electrical, chemical, gas, mechanical, paper, wood or natural fires

and may also include:

- fire trucks
- fire reels
- fire hydrants and hoses
- manual fire fighting instruments
- fire service approved fire suppression extinguishing agents, such as foam and retardants

Communication may include:

- verbal and non-verbal language

RANGE STATEMENT

- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

and may relate to:

- evacuation
- visitors
- members of the public on site
- lightning strikes
- smoke
- flames
- storms
- equipment overheating
- flammable liquid spills
- electrical ignition
- changes to environmental conditions
- fire prevention procedures such as risk, hazards, incidents or equipment malfunctions

Signs of fire may include:

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Records and reports may include:

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR2205B Follow OHS policies and procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to work safely adhering to defined Occupational Health and Safety (OHS) policies and procedures to ensure own safety and that of others. The unit includes emergency, risk and hazard response procedures

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR2205A Follow OHS policies and procedures

Application of the Unit

Application of the unit

The unit involves following OHS policies and procedures in a variety of work settings including a forest environment, a saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Follow safe work practices

- 1.1. Applicable ***OHS, environmental, legislative and organisational requirements*** relevant to following OHS policies and procedures are identified and followed
- 1.2. Work tasks are performed following safe operating procedures in line with organisational policies and procedures
- 1.3. ***Operation and use of tools, equipment and machinery*** is appropriate to work task requirements and in line with manufacturer's recommendations and organisational policies and procedures
- 1.4. ***Personal protective equipment and clothing*** is selected and used appropriate to work task requirements, and stored in line with organisational procedures
- 1.5. ***Plant and equipment guards*** are used in line with manufacturer's specifications
- 1.6. ***Safety signs and symbols*** are identified and followed
- 1.7. ***Communication*** with others is established and

ELEMENT	PERFORMANCE CRITERIA
2. Identify risks	maintained in line with organisational policies and procedures
	2.1. Existing and potential hazards in the work area are identified and reported to appropriate personnel
	2.2. OHS issues and risks in the work area are identified and reported to appropriate personnel
	2.3. Hazard, accident or incident reports are completed accurately and clearly in line with organisational policies and procedures
3. Follow emergency procedures	3.1. Appropriate personnel are notified in the event of an emergency
	3.2. Workplace procedures and work instructions are followed for controlling risks and protecting the environment
	3.3. Safe workplace procedures for dealing with accidents and emergencies are followed within scope of responsibilities
	3.4. Emergency and evacuation procedures are practised and carried out in the event of an emergency
	3.5. Emergency and evacuation procedures are recorded and reported accurately and clearly in line with organisational policies and procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain personal protective equipment and clothing
- Communication skills sufficient to accurately follow emergency and evacuation procedures; use appropriate communication and interpersonal techniques with colleagues; accurately identify and follow safety signs and symbols
- Literacy skills sufficient to accurately complete and maintain workplace information, records and reports
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify potential or existing risks and hazards

REQUIRED SKILLS AND KNOWLEDGE

in the workplace and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for OHS policies and procedures
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for OHS policies and procedures
- Environmental risks and hazard identification
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently follow OHS policies and procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to following OHS policies and procedures
- following organisational policies and procedures relevant to OHS policies and procedures

EVIDENCE GUIDE

Context of and specific resources for assessment

- effective communication and safe work practices
- response procedures to workplace risk, hazards and emergencies
- accessing and applying workplace safety procedures
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Organisational requirements may include:

Operation and use of tools, equipment and machinery may include:

minimising:

- the impact of their use on the environment
- carbon emissions
- waste

Personal protective equipment and clothing may include:

that prescribed under legislation, regulation and workplace policies and practices including:

- overalls
- steel capped boots
- high visibility vest
- jackets

RANGE STATEMENT

- gloves
 - safety glasses
 - safety visors
 - hard hats
 - caps
 - dust masks
 - respirators
 - ear muffs
 - ear plugs
 - cut resistant leg protection
- Plant and equipment guards** may include:
- those prescribed by the manufacturer of the plant or equipment and specified to be used under OHS legislation
- Safety signs and symbols** may include:
- hazard identification
 - site safety
 - directional
 - traffic
 - warning signs and symbols
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Hazards** may include:
- chemical spills
 - gases
 - liquids under pressure
 - moving machinery and equipment
 - hazardous materials
 - work at heights
 - high temperatures
 - noise
 - dust
 - vapours
 - fires
 - protrusions
 - sharp equipment

RANGE STATEMENT

- Work area** may include:
- overhanging beams
 - traffic
 - forest site
 - manufacturing plant
 - retail outlet
 - warehouse
 - factory
 - office
 - plant
- Appropriate personnel** may include:
- safety officers
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Controlling risks and protecting the environment must ensure:** own safety and safety of others takes priority over environmental protection
- Records and reports** may include but not be limited to:
- OHS policies and procedures
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR2207B Maintain quality and product care

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to maintain and monitor quality of personal output and care of the products being utilised and produced. The unit includes applying the recognition of timber technology

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR2207A Maintain quality and product care

Application of the Unit

Application of the unit The unit involves maintaining quality and product care in a variety of work settings including a forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---------------------------------------|--|
| 1. Maintain quality output | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to maintaining quality and product care are identified and followed
1.2. <i>Quality system</i> procedures are applied to personal work, followed and adhered to
1.3. <i>Products</i> are <i>visually inspected</i> before processing or completion of handling
1.4. <i>Product specifications</i> are identified and checked with <i>appropriate personnel</i>
1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Apply timber technology assessment | 2.1. <i>Species</i> and <i>timber structure</i> are classified and checked with appropriate personnel
2.2. <i>Features</i> are located and compared with product specification requirements
2.3. <i>Characteristics</i> are evaluated and drying or treatment requirements recorded as required by the enterprise |

ELEMENT	PERFORMANCE CRITERIA
3. Monitor and control product care	<p>2.4. <i>Visual appearance</i> is assessed and reported in line with workplace procedures as required by the enterprise</p> <p>3.1. <i>Product recovery</i> is monitored to optimise the resource value and <i>minimise waste</i></p> <p>3.2. Potential of materials to provide the highest <i>value added</i> return is checked with appropriate personnel</p> <p>3.3. Machinery and equipment is <i>regularly maintained</i> and adjusted to minimise waste and product damage</p> <p>3.4. Problems are immediately identified and promptly reported to appropriate personnel to avoid repetition of de-valued product</p> <p>3.5. Quality and product care procedures are <i>recorded and reported</i> in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to classify species and timber structures; assess visual appearance of timber
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify and interpret work requirements

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for the maintenance of quality and product care
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures relevant to the maintenance of quality and product care
- Environmental risks and hazard identification

REQUIRED SKILLS AND KNOWLEDGE

- Optimisation of timber
- Quality systems
- Product care and processing
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently maintain quality and product care

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to maintaining quality and product care
- following organisational policies and procedures relevant to maintaining quality and product care
- maintenance of quality and product care in line with environmental legislation and workplace procedures
- effective communication and safe work practices
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and

Context of and specific resources for assessment

EVIDENCE GUIDE

environmental constraints

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity

RANGE STATEMENT

- Organisational requirements** may include:
- anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Quality systems** may include:
- enterprise based systems
 - second party certification
 - third party certification
 - ISO9000 series
 - other regulatory systems
- Product** may include:
- trees
 - logs
 - seed
 - planting stock
 - timber
 - panels
 - board
- Product specifications** may include:
- specifications set for optimisation of timber set in line with the available resource
 - customer requirements
 - industry standard cross sections and lengths
 - enterprise standards
- Visual inspection** may include:
- assessing the appropriateness of defects
 - contamination
 - timber colours
 - insect attack
 - surface finishes

RANGE STATEMENT

- loose surfaces
 - bubbles
 - holes
 - breakages
 - machine caused defects
- Appropriate personnel** may include:
- supervisors
 - line managers
 - colleagues
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Species** may include:
- native
 - imported species
- Timber structures** may include:
- hardwood or softwood cell structured timber
- Features** may include:
- warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
- Characteristics** may include:
- colour
 - density
 - texture
 - grain
 - figure
 - qualities
 - uses
- Visual appearance** may include:
- colour
 - grain
 - figure
 - aesthetics

RANGE STATEMENT

- Product recovery** may include:
- sawn timber used in manufacturing of timber engineered products where defective timber can be recovered to be used in other parts of the plant to minimise waste
 - recovering logs or converting logs into useable boards without damage or loss of product
- Minimising waste** may include:
- appropriately assessing timber for recovery
 - maximising product or resource use
 - recycling defective product, off cuts and residues in line with organisational guidelines
- Value adding** is to include:
- maximising use of the product or resource
 - minimising waste
 - optimising the use of natural resources
- Regular maintenance of machinery and equipment** may include:
- minimising:
- the impact of the use of machinery and equipment on the environment
 - carbon emissions
- Records and reports** may include but not be limited to:
- OHS policies and procedures
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR3201B Implement safety, health and environment policies and procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to implement SHE policies and procedures on a site adhering to defined policies and procedures to ensure own safety and that of others, together with protection of the environment. The unit includes implementation of recognised environmental care principles

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR3201A Implement SHE policies and procedures

Application of the Unit

Application of the unit

The unit involves the implementation of SHE policies and procedures in a variety of work settings including forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------|--|
| 1. Apply SHE practices | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to the implementation of <i>SHE</i> policies and procedures are identified and followed
1.2. <i>Communication</i> with others is established and maintained in line with SHE requirements
1.3. Tasks are performed in a safe manner and in line with legislative requirements and <i>environmental care principles</i> , organisational policies and procedures
1.4. Duties, equipment and materials are organised in line with SHE requirements and organisational procedures |
| 2. Assess and control risks | 2.1. <i>SHE issues and Hazards</i> in the work area are detected, assessed and reported to <i>appropriate personnel</i>
2.2. Work practices and processes are analysed to identify areas for improvement in relation to SHE issues and hazards |

ELEMENT	PERFORMANCE CRITERIA
	2.3.Changes to work practices and processes to improve SHE concerns are proposed, provided to appropriate personnel and acted on as directed
	2.4.Workplace procedures and work instructions are followed for <i>controlling risks and protecting the environment</i>
	2.5.SHE, hazard, environmental or incident reports are completed in line with workplace procedures and State or Territory legislation
3. Follow emergency procedures	3.1.In an emergency, appropriate personnel are identified and contacted
	3.2.Workplace procedures for dealing with own safety, safety of others, environmental incidents, accidents, and emergencies are followed within scope of responsibilities
	3.3.Emergency and evacuation procedures are practised, recorded and implemented as required
	3.4.SHE procedures are <i>recorded and reported</i> in line with workplace procedures
4. Implement environmental procedures	4.1.Organisational <i>environmental goals</i> are identified and assessed
	4.2. <i>Training</i> and <i>operational controls</i> are implemented in line with workplace procedures
	4.3. <i>Environmental measures</i> and <i>impact</i> on the environment are monitored and <i>corrective action</i> taken as required in line with workplace procedures
	4.4.Care for the environment is integrated into all day-to-day activities

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain personal protective equipment and clothing
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for the implementation of SHE policies and procedures
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for the implementation of SHE policies and procedures
- Environmental risks and hazard identification
- Community issues in relation to the environment
- Hazard identification
- Assessment and control of risks
- Emergency procedures
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can implement SHE policies and procedures

Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the

EVIDENCE GUIDE

competency in this unit

requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to the implementation of SHE policies and procedures
- following organisational policies and procedures relevant to the implementation of SHE policies and procedures
- the ability to maintain safe and healthy working conditions
- the control of environmental measures within the organisation

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions

RANGE STATEMENT

- relating to forest fire
- manual handling including shifting, lifting and carrying
 - machine guarding
- Environmental requirements may include:**
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - heritage and traditional land owner issues
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- SHE is to include:**
- policy set by governments, local authorities, regulatory bodies or organisations to care for people and the environment

RANGE STATEMENT

- Communication** may include:
- ensuring a safe and productive workplace while protecting the natural environment and supporting its sustainability
 - using effective communication and education
 - verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language

Environmental care principles are to include:

environmental policy which ensures:

- compliance, improvement (where required to reflect environmental policy) and prevention
- continuous cycle of planning, implementing, monitoring, reviewing and improving environmental practices and systems

Hazards may include:

- chemical spills
- gases
- liquids under pressure
- moving machinery and equipment
- hazardous materials
- work at heights
- high temperatures
- noise
- dust
- vapours
- fires
- protrusions
- sharp equipment
- overhanging beams
- traffic
- potential of equipment use and unsafe work practices to adversely impact on the environment
- inappropriate storing of materials and equipment
- blocked or no access and exit

RANGE STATEMENT

Appropriate personnel may include:

- safety officers
- supervisors
- suppliers
- clients
- colleagues
- managers
- environmental officers

Controlling risks and protecting the environment must ensure: own safety and safety of others takes priority over environmental protection

Records and reports may include:

- OHS policies and procedures
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Environmental goals are to include:

- environmental sustainability considerations and actions for operational and activity interface
- material, energy (including renewable energy) and other resource use
- emissions control and where possible, reduction
- waste generation, control and where possible, reduction
- product and service use
- land and infrastructure interaction
- accident prevention
- practices that use materials and energy efficiently and effectively in terms of environmental sustainability
- waste management, recycling and re-use outcomes that are environmentally effective, efficient and safe

Training may include:

- in-house or external training programs
- one-on-one supervision
- programs that maintain up-to-date knowledge of legislative changes at the local, State,

RANGE STATEMENT

Operational controls may include:

Territory and Commonwealth levels

- control of air emissions
- solid and hazardous wastes
- contamination of land
- noise
- odour
- dust
- traffic
- water discharges
- energy use
- raw material and resource use
- hazardous material storage and handling

Environmental measures may include:

- environmental and energy efficiency improvement plans (including the use of renewable energy)
- workplace waste management systems
- reducing emissions of greenhouse gases
- reducing use of non-renewable resources
- reducing chemical use
- supply chain management such as choosing suppliers with environmental sustainability (and methods to monitor and improve their environmental performance) as part of their charter
- holistically managing wood waste
- applying carbon footprint strategies in forest operations

Impact may include:

- assessment of actual outcome or potential outcome
- beneficial or damaging
- magnitude or degree
- frequency
- likelihood
- duration
- geographic area
- which aspects of the environment it affects
- is it regulated
- who is involved
- any consequences for other aspects of the environment
- potential for escalation

RANGE STATEMENT

Corrective action: is action that supports environmental sustainability

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR3202B Conduct quality and product care procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to monitor quality of output and follow product care procedures

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR3202A Conduct quality and product care procedures

Application of the Unit

Application of the unit

The unit involves conducting quality and product care procedures in a variety of work settings including a forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Conduct quality procedures	<p>1.1.Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to conducting quality and <i>product</i> care procedures in line with environmental legislation and workplace procedures are identified and followed</p> <p>1.2.<i>Quality system</i> procedures are applied to work, implemented and adhered to</p> <p>1.3.Products are <i>visually inspected</i> before processing or completion</p> <p>1.4.<i>Product specifications</i> are checked and conformed with</p> <p>1.5.<i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Monitor and control product care	<p>2.1.<i>Product recovery</i> is planned to optimise the resource value and <i>minimise waste</i></p> <p>2.2.Potential of materials to provide the highest <i>value added return is planned</i></p> <p>2.3.<i>Species, timber structure, features</i> and <i>characteristics</i> are assessed and reported as required by the enterprise</p> <p>2.4.Materials are <i>graded</i> and directed to best end use in line with industry standards as required by the</p>

ELEMENT	PERFORMANCE CRITERIA
3. Control product quality	<p>enterprise</p> <p>2.5.Machinery and equipment is regularly maintained and adjusted to minimise product waste</p> <p>2.6.Problems are immediately assessed and rectified to avoid repetition of lost product</p> <p>3.1.Products are assessed for quality and customer specification requirements</p> <p>3.2.Products are prepared for <i>despatch</i> to prevent or minimise damage</p> <p>3.3.Finished products are supplied to customer in line with <i>work order</i> and workplace procedures</p> <p>3.4.Quality and product care procedures are <i>recorded and reported</i> in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to efficiently and safely conduct quality and product care procedures; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for quality and product care procedures
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures relevant to

REQUIRED SKILLS AND KNOWLEDGE

- quality and product care
- Environmental risks and hazard identification
- Quality systems and supply coordination
- Product care and processing
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct quality and product care procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting quality and product care procedures
- following organisational policies and procedures relevant to conducting quality and product care procedures
- the ability to conduct quality and product care procedures in line with environmental legislation and workplace procedures
- effective communication and safe work practices
- Competency is to be assessed in the workplace or

Context of and specific resources for

EVIDENCE GUIDE

assessment

realistically simulated workplace

- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment

EVIDENCE GUIDE

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

- Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Product** may include:
- trees
 - logs
 - seed
 - planting stock
 - timber
 - panels
 - board
- Quality system** may include:
- enterprise based system
 - second party certification
 - third party certification
 - ISO9000 series
 - other regulatory systems
- Visual inspection** may include:
- assessing the appropriateness of features
 - contamination
 - timber colours
 - insect attack
 - surface finishes

RANGE STATEMENT

- loose surfaces
 - bubbles
 - holes
 - breakages
 - machine caused defects
- Product specifications** may include:
- specifications set for optimisation of timber set in line with the available resource
 - customer requirements
 - industry standard cross sections and lengths
 - enterprise standards
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Product recovery** may include:
- sawn timber used in manufacturing of timber engineered products where defective timber can be recovered, to be used in other parts of the plant to minimise waste
 - recovering logs or converting logs into useable boards without damage or loss of product
- Minimising waste** may include:
- maximising product or resource use
 - appropriately assessing timber for recovery
 - recycling defective product, off cuts and residue in line with organisational guidelines
- Value adding** is to include:
- maximising use of the product or resource
 - minimising waste
 - optimising the use of natural resources
- Species** may include:
- native
 - imported species
- Timber structure** may include:
- hardwood or softwood cell structured timber
- Features** may include:
- warp
 - wane

RANGE STATEMENT

- cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
- Characteristics** may include:
- colour
 - density
 - texture
 - grain
 - figure
 - qualities
 - uses
- Grading**
- is the process of visually inspecting logs or timber to classify their quality and use
- Despatch**
- is the sending out of products relating to a customer order via various means of transport
- and may include:
- stacking
 - striping
 - strapping
 - store/dispatch of product
- Work order is to include:**
- instructions for the environmental monitoring of work and procedures
- and may include
- environmental care requirements relevant to the work
- Records and reports** may include:
- conducting quality and product care procedures
 - risk
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR3203B Evaluate fire potential and prevention

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to continually monitor and assess the potential of fire during normal work activities. The unit includes implementing basic fire prevention measures

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR3203A Evaluate fire potential and prevention

Application of the Unit

Application of the unit

The unit involves the evaluation of fire potential and prevention in a variety of work settings including a forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------|---|
| 1. Prepare for fires | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to the evaluation of fire potential and <i>fire prevention</i> are identified and followed</p> <p>1.2. <i>Types</i> and <i>potential of fire</i> are constantly evaluated and documented through risk assessment</p> <p>1.3. <i>Equipment</i> is selected appropriate to potential work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. <i>Evaluation processes</i> are planned in line with site procedures</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Assess fire potential | <p>2.1. <i>Weather</i> conditions are monitored and reports inspected for changing conditions such as storms and high winds</p> <p>2.2. Equipment conditions are monitored for overheating</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Prevent fires	<p>and electrical sparking and acted upon immediately</p> <p>2.3. <i>Hazardous and flammable substances</i> are monitored to assess the potential for spillage and combustion</p> <p>2.4. Potential of fire is reported to <i>appropriate personnel</i></p> <p>3.1. <i>Fire risks and hazards</i> are <i>controlled</i> and monitored in line with workplace procedures</p> <p>3.2. <i>Fire extinguishing equipment</i> is regularly checked to ensure it is serviceable for emergencies</p> <p>3.3. Hazardous or flammable substances are handled in line with OHS and <i>environmental management regulations</i></p> <p>3.4. <i>Signs of fire potential</i> are recognised and alarm raised to alert appropriate personnel</p> <p>3.5. Fire potential and prevention procedures are <i>recorded and reported</i> in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment.
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures, efficiently and safely evaluate fire potential and prevention

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for evaluating fire potential and prevention

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures relevant to evaluating fire potential and prevention
- Fire types and potential methods of ignition
- Environmental risks and hazard prevention
- Fire awareness and prevention techniques
- Recognised tools such as threat and risk analysis
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently evaluate fire potential and prevention

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to fire potential and prevention evaluation
- following organisational policies and procedures relevant to fire potential and prevention evaluation
- following applicable licensing or certification requirements
- evaluation of fire potential and prevention in line

EVIDENCE GUIDE

- Context of and specific resources for assessment**
- with environmental legislation and workplace procedures
 - effective communication and safe work practices
 - Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- hot work permits to be issued by authorised personnel
- protective shields for welding and grinding activities
- written/displayed evacuation procedures
- appropriate fitness for the task

RANGE STATEMENT

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Fire prevention may include:

- cutting of fire breaks
- clearing of undergrowth
- ensuring equipment is far enough away from combustible materials
- housekeeping to ensure work area is clear of waste and that waste is stored in line with

RANGE STATEMENT

workplace procedures

- providing suitable fire extinguishing equipment
- undertaking regular evacuation training
- maintaining an ordered work area to ensure access and exit
- assessing equipment to ensure it is serviced as required in line with workplace procedures
- quarantining equipment to be serviced in line with workplace procedures

Types of fires may include:

- wildfires
- electrical storm induced fires
- arson
- accidental fires
- electrical fires
- mechanical fires

Potential of fires may include:

- assessing environmental conditions and operating procedures for any possible aspects which may cause fire
- monitoring changes and forecasting potential changes (where possible) to environmental conditions which may cause fire
- keeping appropriate personnel informed of changes and potential changes to environmental conditions which may cause fire

Equipment may include:

- any plant and equipment used in harvesting or forest growing activities

Evaluation processes may include:

- referring to available information (via MSDSs , HAZCHEM codes and signs) for chemical-based fires
- continuous monitoring of environmental, weather and equipment conditions and changes
- continuous monitoring of the impact of activities on the environment

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative

RANGE STATEMENT

language

- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

and may relate to:

- evacuation
- visitors or members of the public on site

Weather may include:

conditions such as:

- high winds
- electrical storms
- lightning strikes
- excessive heat and low humidity

Hazardous and flammable substances may include:

- engine oils
- fuels
- treatment substances
- cleaning products
- fire wardens
- fire response personnel
- supervisors
- suppliers
- clients
- colleagues
- managers
- emergency evacuation committee

Appropriate personnel may include:

- weather conditions which induce fire
- welding or grinding sparks
- dry undergrowth
- potential of equipment use and unsafe work practices to create fire
- combustible materials such as dry or dead scrub, tall grasses, rubbish, oily rags
- waste material proximity to equipment
- flammable liquids
- inappropriate storing of materials and equipment
- blocked or no access and exit

Fire risks and hazards may include:

Controlled may include:

- controlling vegetation (such as grass, heath, scrub and forest undergrowth) to minimise

RANGE STATEMENT

	risk
	<ul style="list-style-type: none">• cutting of firebreaks (including clearing areas which are slashed or ploughed and clear of any combustible material, wide enough to prevent fires jumping the break)• housekeeping to ensure flammable, combustible or waste materials are in safe proximity to machinery• extinguishers for electrical, chemical, gas, mechanical, paper, wood or natural fires
Fire extinguishing equipment may include:	and may also include: <ul style="list-style-type: none">• fire trucks• fire reels• fire hydrants and hoses• manual fire fighting instruments• fire service approved fire suppression extinguishing agents, such as foam and retardants
Environmental management regulations:	eliminate or minimise exposure to hazards within the workplace and may cover: <ul style="list-style-type: none">• environmental monitoring and audit plan• emissions - hazardous substances• air quality• noise pollution• dangerous goods/hazardous substances• risk of fire• waste minimisation• reuse and recycling• lightning strikes• high winds• smoke• flames• storms• equipment overheating• flammable liquid spills• electrical ignition• changes to environmental conditions
Signs of fire potential may include:	<ul style="list-style-type: none">• environmental care and fire prevention procedures such as risk, hazards, incidents, equipment malfunctions
Records and reports may include:	

RANGE STATEMENT

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR3204B Visually assess materials

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to visually assess material characteristics for defects and quality

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR3204A Visually assess materials

Application of the Unit

Application of the unit

The unit involves the visual assessment of materials in a variety of work settings including forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assessing	1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to the visual assessment of <i>materials</i> are identified and followed 1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i> 1.3. Visual assessment processes are planned in line with site procedures 1.4. Type and quantity of material to be visually <i>assessed</i> is acquired from the <i>storage location</i> 1.5. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements
2. Visually assess material	2.1. Material requirements for storage or subsequent <i>processing operations</i> are selected 2.2. Characteristics and <i>defects</i> of material are visually assessed against industry standards 2.3. Defects are clearly marked for <i>treatment or sawing</i> in line with site requirements 2.4. Assessment outcomes and distribution problems are

ELEMENT	PERFORMANCE CRITERIA
	<i>recorded and reported</i> in line with workplace procedures
3. Distribute material	3.1. Material is directed and moved to storage or processing operations in line with site requirements 3.2. Sub-standard materials are rejected and <i>disposed of</i> in line with site requirements 3.3. <i>On-site movement of material</i> is monitored to ensure intended flow is achieved 3.4. Storage locations are labelled in line with site systems

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; recognise and mark defects and sub-standard materials; assess materials to industry standards
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for visually assessing materials
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures relevant to visually assessing materials
- Environmental risks and hazard prevention
- Methods of visual estimation and assessment, colour identification and tagging

REQUIRED SKILLS AND KNOWLEDGE

- Typical material defects and characteristics
- Distribution processes for assessed materials
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can visually assess materials

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to the visual assessment of materials
- following organisational policies and procedures relevant to the visual assessment of materials
- visual assessment of a full range of materials in readiness for storage and/or processing
- distribution of materials using designated equipment
- effective communication and safe work practices
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised

Context of and specific resources for assessment

EVIDENCE GUIDE

work practices, safety requirements and environmental constraints

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity

RANGE STATEMENT

Organisational requirements may include:

- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Materials may include:

- hardwood and softwood logs and timber
- boards
- panels
- veneer
- laminated veneer
- imported species
- native species
- recently felled or stored materials
- wood chips
- plywood
- particle board
- fibreboard
- medium density fibreboard

Work order is to include:

- instructions for the environmental monitoring of work and procedures
- instructions for the receipt/despatch and visual assessment of materials to/from the designated storage location or processing operations

and may include:

- type
- size
- quantity

RANGE STATEMENT

- Appropriate personnel** may include:
- environmental care requirements relevant to the work
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Assessment** is to include:
- visually assessing the quality of materials for characteristics, defects and imperfections
- and may include:
- measuring the amount of moisture contained in a log to determine if it falls within specifications for conversion and drying or other processing operations
- Storage locations** may include:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** may include:
- moisture meters
 - lifting equipment for the movement of materials
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding

RANGE STATEMENT

- use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Processing operations** may include:
- sawmilling
 - panel production
 - wood chipping
 - pulp and paper production
- Defects** may include:
- water damage
 - chips
 - splits
 - warp
 - wane
 - cupping
 - shakes
 - insect defects or attack
 - resin pockets
 - contamination
 - burls
 - cracks
 - dry rot
 - wet rot
 - breakage from felling
 - dents
 - loose surface
 - lifting coatings
 - poor adhesion
 - thin or missing coatings
 - chipped edges
 - surface bubbles
 - pin holes
 - grain angles
 - gum veins
 - loose or missing knots
- Treatment** may include:
- chemical treatment of materials to eradicate insect attack or other defects
- Sawing** may include:
- cutting out sections of the material (if practical) to retain good quality sections

RANGE STATEMENT

Records and reports may include:

- product type
- size
- visual inspection
- labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

Disposing of rejected sub-standard materials may include:

- manual
- using a computer-based system or another appropriate organisational communication system
- environmentally effective, efficient and safe waste management, recycling and re-use practices and guidelines

On-site movement of material:

lifting equipment may include:

- fork lifts
- slings
- trolley jacks
- gantry cranes
- loaders

assistance with lifting may include:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR4201B Monitor safety, health and environment policies and procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to monitor SHE on a site adhering to defined policies and procedures to ensure own safety and that of others, together with protection of the environment. The unit includes monitoring of environmental management systems

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR4201A Monitor SHE policies and procedures

Application of the Unit

Application of the unit

The unit involves the monitoring of SHE policies and procedures in a variety of work settings including forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------|---|
| 1. Monitor SHE practices | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to the monitoring of <i>SHE</i> policies and procedures are identified and followed</p> <p>1.2. <i>Communication</i> with others is established and maintained in line with SHE requirements</p> <p>1.3. Tasks are monitored in a safe manner in line with legislative requirements and <i>environmental management systems</i>, organisational policies and procedures</p> <p>1.4. Organisation of duties, equipment and materials are monitored in line with SHE requirements and organisational procedures</p> |
| 2. Monitor and assess risks | <p>2.1. <i>Hazards</i> in the work area are monitored, assessed and reported to designated personnel</p> <p>2.2. SHE issues and risks in the work area are monitored, assessed and reported to <i>appropriate personnel</i></p> <p>2.3. Work practices and processes are analysed to identify areas for improvement in relation to SHE</p> |

ELEMENT	PERFORMANCE CRITERIA
	issues and risks
	2.4.Changes to work practices and processes to improve SHE concerns are determined and implemented
	2.5.Workplace procedures and work instructions are monitored for <i>controlling risks and protecting the environment</i>
	2.6.SHE or incident reports are checked to ensure they are in line with workplace procedures and State or Territory legislation
3. Monitor emergency procedures	3.1.In an emergency, appropriate personnel verification is monitored
	3.2.Workplace procedures for dealing with own safety, safety of others, environmental incidents, accidents, and emergencies are monitored within scope of responsibilities
	3.3.Emergency and evacuation procedures are monitored and checked after an emergency, and suggestions made to appropriate personnel about lessons learnt and changes required
	3.4.SHE procedures are <i>recorded and reported</i> in line with workplace procedures
4. Monitor environmental procedures	4.1.Community and organisational <i>environmental goals</i> are monitored and recorded
	4.2. <i>Training</i> and <i>operational controls</i> are monitored to ensure they are in line with workplace procedures
	4.3. <i>Environmental measures</i> are monitored and checked for <i>corrective action</i>
	4.4.Care for the environment is monitored to check for integration into all day-to-day activities
	4.5.Progress reviews are conducted to assess <i>impact</i> on the environment

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain personal protective equipment and

REQUIRED SKILLS AND KNOWLEDGE

clothing

- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for monitoring SHE policies and procedures
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures relevant to monitoring SHE policies and procedures
- Community issues in relation to the environment
- Lessons learnt after an emergency
- Environmental risk and hazard identification
- Assessment and control of risks
- Emergency procedures
- Environmental management systems
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently monitor SHE policies and procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to monitoring SHE policies and procedures
- following organisational policies and procedures relevant to monitoring SHE policies and procedures
- monitoring of SHE policies and procedures within the organisation
- monitoring of safe and healthy working conditions
- assessment of environmental measures within the organisation

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills

EVIDENCE GUIDE

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment

RANGE STATEMENT

- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements

RANGE STATEMENT

- SHE** is to include:
- environmental management requirements (waste disposal, recycling and re-use guidelines)
 - policy set by governments, local authorities, regulatory bodies or organisations to care for people and the environment
 - ensuring a safe and productive workplace while protecting the natural environment and supporting its sustainability
 - using effective communication and education
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Environmental management systems** are to include:
- environmental policy which ensures:
- compliance, improvement and prevention
 - continuous cycle of planning, implementing, monitoring, reviewing and improving environmental practices and systems
- Hazards** may include:
- chemical spills
 - gases
 - liquids under pressure
 - moving machinery and equipment
 - hazardous materials
 - work at heights
 - high temperatures
 - noise
 - dust
 - vapours
 - fires
 - protrusions
 - sharp equipment
 - overhanging beams
 - traffic

RANGE STATEMENT

- Appropriate personnel** may include:
- potential of equipment use and unsafe work practices to adversely impact on the environment
 - inappropriate storing of materials and equipment
 - blocked or no access and exit
 - safety officers
 - managers
 - suppliers
 - clients
 - colleagues
 - environmental officers
- Controlling risks and protecting the environment must ensure:** own safety and safety of others takes priority over environmental protection
- Records and reports** may include: but not be limited to:
- OHS policies and procedures
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system
- Environmental goals** are to include:
- environmental sustainability considerations and actions for operational and activity interface
 - material, energy and other resource use
 - emissions control and where possible, reduction
 - waste generation, control and where possible, reduction
 - product and service use
 - land and infrastructure interaction
 - accident prevention
 - practices that use materials, energy and other resources efficiently and effectively in terms of environmental sustainability
 - waste management, recycling and re-use

RANGE STATEMENT

outcomes that are environmentally effective, efficient and safe

Training may include:

- in-house or external training programs
- one-on-one supervision
- programs that maintain up-to-date knowledge of legislative changes at the local, State, Territory and Commonwealth levels

Operational controls may include:

- control of air emissions
- solid and hazardous wastes
- contamination of land
- noise
- odour
- dust
- traffic
- water discharges
- energy use, raw material and resource use
- hazardous material storage and handling

Environmental measures may include:

- environmental and resource/energy efficiency improvement plans
- workplace waste management systems
- reducing emissions of greenhouse gases
- reducing use of non-renewable resources
- reducing chemical use
- supply chain management such as choosing suppliers with environmental sustainability (and methods to monitor and improve their environmental performance) as part of their charter
- holistically managing wood waste
- applying carbon footprint strategies in forest operations

Corrective action:

is action that supports environmental sustainability

Impact may include:

- assessment of actual outcomes or potential outcomes
- beneficial or damaging
- magnitude or degree
- frequency
- likelihood
- duration
- geographic area

RANGE STATEMENT

- which aspects of the environment it affects
- is it regulated
- who is involved
- any consequences for other aspects of the environment
- potential for any escalation

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR4202B Monitor and review forestry operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to monitor and review forestry operations on a site with regard to setting improvement recommendations and developing new and flexible approaches

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR4202A Monitor and review forestry operations

Application of the Unit

Application of the unit

The unit involves monitoring and reviewing forestry operations in a variety of work settings including a forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------------|--|
| 1. Monitor forestry operations | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to monitoring and reviewing forestry operations are identified and followed</p> <p>1.2. <i>Communication</i> with others is established and maintained in line with <i>forestry operation</i> requirements</p> <p>1.3. Tasks are monitored in a safe manner in line with legislative requirements and <i>environmental management systems</i>, organisational policies and procedures</p> <p>1.4. Organisation of duties, practices, equipment and materials are monitored in line with OHS requirements and organisational procedures</p> |
| 2. Review improvement opportunities | <p>2.1. Operational plans and site practices are <i>reviewed</i> for potential improvement, modifications and time savings</p> <p>2.2. Community and organisational <i>environmental goals</i> are monitored and recorded</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Develop new and flexible approaches	<p>2.3. <i>Training</i> and <i>operational controls</i> are monitored to ensure they are in line with workplace procedures</p> <p>2.4. Recommendations for improvement are recorded and reviewed for resourcing requirements</p> <p>2.5. Plans to introduce change are made in consultation with <i>appropriate personnel</i></p> <p>3.1. New systems and technologies are <i>developed and trialled</i> on site following OHS requirements and in line with site requirements</p> <p>3.2. New systems are checked for effective improvements or time savings, modified and communicated to appropriate personnel for implementation</p> <p>3.3. <i>Care for the environment</i> is monitored to check for integration into all day-to-day activities</p> <p>3.4. Progress reviews are conducted to assess <i>impact</i> of improvement and on the environment</p> <p>3.5. Forestry operation procedures are <i>recorded and reported</i> in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain personal protective equipment and clothing
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems, environmental issues and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for monitoring and reviewing forestry operations

- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures relevant to monitoring and reviewing forestry operations
- Sustainable procurement practices, including selecting products and services on the basis of how they minimise and monitor their impact on the environment
- Types of equipment and procedures and their environmentally friendly use, operation and maintenance
- Forestry operations, techniques and technology
- Operational systems
- Environmental risks and hazard identification
- Environmental management systems
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently monitor and review forestry operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and

EVIDENCE GUIDE

codes of practice relevant to monitoring and reviewing forestry operations

- following organisational policies and procedures relevant to monitoring and reviewing forestry operations
- monitoring and reviewing of operational policies and procedures within the organisation
- monitoring of on-site forestry operations and recommended improvement systems, techniques or technology
- assessment of environmental measures as a result of improvements within the organisation

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements may include:**
- manual handling including shifting, lifting and carrying
 - machine isolation and guarding
 - legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - heritage and traditional land owner issues
 - legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Organisational requirements may include:**
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm
- Communication may include:**

RANGE STATEMENT

- Forestry operations** may include:
- understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
 - improvement of timber technology methodologies
 - on-site forestry operations
 - ancillary forest operations
- Environmental management systems** are to include:
- environmental policy which ensures:
- compliance, improvement and prevention
 - continuous cycle of plan, implement, monitor, review and improve environmental practices and systems
- Reviewed is to include**
- assessing operational plans and site practices in relation to:
- energy consumption
 - carbon emissions
 - renewable and non-renewable resources
 - waste management, recycling and re-use
 - material consumption
 - hazardous and toxic materials
 - chemical use
 - equipment use and safety of work practices
 - storing of materials and equipment
 - environmental considerations and actions for operational and activity interface, material, energy and other resource use
 - emission control
 - waste generation and control
 - product and service use
 - land and infrastructure interaction
 - accident prevention
 - waste management, recycling and re-use outcomes that are environmentally effective, efficient and safe
- Training** may include:
- in-house or external training programs
 - one-on-one supervision

RANGE STATEMENT

Operational controls may include:

- measurement of improvement outcomes
- coaching and mentoring of personnel in regard to new methodologies
- control of environmental conditions

Appropriate personnel may include:

- safety officers
- supervisors
- suppliers
- clients
- colleagues
- managers

Developing and trialling new systems and technologies is to consider:

- environmental resource management and services such as reducing waste, sustainable procurement practices
- energy and material efficiency such as recycling, re-using, water usage and management, energy usage and management

Care for the environment includes:

- environmental sustainability
- protection of water courses and water quality
- soil and salinity management
- reduction and disposal of waste
- energy efficiency
- biodiversity and habitat protection
- conservation of natural resources
- fire management

Impact may include:

- assessment of actual outcomes or potential outcomes
- beneficial or damaging
- magnitude or degree
- frequency
- likelihood
- duration
- geographic area
- which aspects of the environment it affects
- is it regulated
- who is involved
- any consequences for other aspects of the environment
- potential for any escalation

Records and reports may include:

- forestry operations
- OHS policies and procedures
- quality outcomes

RANGE STATEMENT

- technology requirements

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR4203B Monitor quality and product care procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to coordinate and monitor quality of output and care of products and product supply procedures

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOR4203B Monitor quality and product care procedures

Application of the Unit

Application of the unit The unit involves the monitoring of quality and product care procedures in a variety of work settings including a forest environment, saw mill, wood chip mill, veneer mill, board/plywood mill, timber treatment plants, downstream processing of timber, forest products factory, forest products sales and service, horticultural, domestic, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Coordinate quality procedures	<p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to the monitoring of quality and product care procedures are identified and followed</p> <p>1.2. <i>Quality system</i> procedures are applied to work, monitored and coordinated</p> <p>1.3. Product <i>visual inspection</i> is coordinated before processing or completion</p> <p>1.4. <i>Product specifications</i> are checked and coordinated</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Monitor and control product care	<p>2.1. <i>Product recovery</i> is planned to optimise the resource value and to <i>minimise waste</i></p> <p>2.2. Potential of materials to provide the highest <i>value added</i> return is planned</p> <p>2.3. <i>Species, timber structure, features and characteristics</i> assessment is monitored and reported as required by the enterprise</p> <p>2.4. Material <i>grading</i> is monitored and directed to best end use in line with industry standards as required by the enterprise</p> <p>2.5. Machinery and equipment maintenance is <i>monitored</i></p>

ELEMENT	PERFORMANCE CRITERIA
3. Control product supply quality	<p>and adjusted to minimise product waste</p> <p>2.6. Problems are immediately assessed and rectified to avoid repetition of lost product</p> <p>3.1. Products are assessed for quality and customer specification requirements</p> <p>3.2. Product <i>despatch</i> preparation is monitored and controlled to ensure the prevention and minimisation of damage</p> <p>3.3. Products are supplied on time and to customer expectations</p> <p>3.4. Quality and product care procedures are <i>recorded and reported</i> in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information and maintain documentation
- Numeracy skills sufficient to estimate and measure and to calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for monitoring of quality and product care procedures
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures relevant to monitoring of quality and product care procedures
- Environmental risks and hazard identification

REQUIRED SKILLS AND KNOWLEDGE

- Optimisation of timber
- Quality systems and supply coordination
- Product care and processing
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently monitor quality and product supply care procedures in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to monitoring of quality and product care procedures
 - following organisational policies and procedures relevant to monitoring of quality and product care procedures
 - monitoring of quality and product supply care in line with environmental legislation and workplace procedures
 - effective communication and safe work practices
- Competency is to be assessed in the workplace or realistically simulated workplace

Context of and specific resources for

EVIDENCE GUIDE

assessment

- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment

EVIDENCE GUIDE

task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

- Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Quality systems** may include:
- enterprise based systems
 - second party certification
 - third party certification
 - ISO9000 series
 - other regulatory systems
- Visual inspection** may include:
- assessing the appropriateness of features
 - contamination
 - timber colours
 - insect attack
 - surface finishes
 - loose surfaces
 - bubbles
 - holes
 - breakages
 - machine caused defects
- Product specifications** may
- specifications set for optimisation of timber set in line with the available resource

RANGE STATEMENT

include:

- customer requirements
- industry standard cross sections and lengths
- enterprise standards

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Product recovery is to include:

- recovering logs or converting logs into useable boards without damage or loss of product

Minimising waste may include:

- appropriately assessing timber for recovery
- maximising product or resource use
- recycling defective product, off cuts and residue in line with organisational guidelines

Value adding is to include:

- maximising use of the product or resource
- minimising waste
- optimising the use of natural resources

Species may include:

- native
- imported species

Timber structures may include:

- hardwood or softwood cell structured timber

Features may include:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Characteristics may include:

- colour
- density
- texture
- grain
- figure
- qualities

RANGE STATEMENT

- uses
 - is the process of visually inspecting logs or timber to classify their quality and use
- Grading**
- Monitoring machinery and equipment maintenance may include:**
- minimising:
 - the impact of their use on the environment
 - carbon emissions
 - is the sending out of products relating to a customer order via various means of transport
- Despatch**
- Records and reports may include:**
- monitoring quality and product supply care procedures
 - risk
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Core

FPICOR6201A Manage sustainability in the workplace

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit describes the outcomes required to manage sustainability in the workplace, including the design, implementation and review of policies and procedures</p> <p>General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication</p>
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Application of the Unit

Application of the unit	<p>The unit involves the knowledge, processes and techniques necessary to design and manage approaches to sustainability within workplaces, including the development and implementation of policy in operations of all sizes in a variety of work settings, including:</p> <ul style="list-style-type: none"> • forest environment • saw mill • wood chip mill • veneer mill • board/plywood mill • timber treatment plants • downstream processing of timber • forest products factory • forest products sales and service • horticultural • domestic • local council • emergency services environment <p>The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills	This unit contains employability skills
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Evaluate workplace sustainability requirements	1.1.Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to managing <i>sustainability</i> in the workplace are identified and followed 1.2.Existing policies and procedures for the workplace are assessed in relation to sustainability requirements 1.3.Research is conducted to define <i>scope of sustainability requirements</i> for the workplace 1.4. <i>Stakeholders</i> are consulted as a key component of the research process 1.5.Recommendations based on research outcomes are

ELEMENT	PERFORMANCE CRITERIA
	documented and feedback is provided to <i>appropriate personnel</i> and stakeholders
2. Design policy	2.1. Draft policy is developed and circulated to stakeholders and appropriate personnel for feedback 2.2. Policy is reviewed and revised, based on feedback 2.3. Policy is designed that reflects the organisation's commitment to sustainability as an integral part of the business planning 2.4. Appropriate <i>strategies</i> for implementation are agreed, documented and communicated to stakeholders
3. Manage policy implementation	3.1. Timelines and budget for implementation are established with appropriate personnel 3.2. <i>Resources</i> are allocated to the implementation process in line with timelines and budget 3.3. Those involved in implementing the policy are informed as to expected outcomes and responsibility is assigned 3.4. Targets and indicators are established to maximise policy outcomes 3.5. <i>Processes</i> are established to facilitate policy implementation
4. Review policy	4.1. Changing trends and opportunities for improved workplace sustainability are evaluated and considered for ongoing improvements 4.2. Reports are monitored for feedback that supports continuous improvement of procedures to enhance sustainability 4.3. Policy is regularly evaluated and modified to reflect ongoing improvement

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use software and communication systems to research,

REQUIRED SKILLS AND KNOWLEDGE

analyse, create and present documents and reports; develop and implement systems and procedures to aid in the achievement of sustainability in the workplace

- Communication skills and interpersonal techniques sufficient to interact appropriately with stakeholders, colleagues and others in the workplace
- Literacy skills sufficient to read and evaluate complex and formal documents, such as policy and legislation
- Numeracy skills sufficient to analyse data on enterprise resource consumption
- Problem solving skills sufficient to review and identify work requirements; identify problems; develop and implement appropriate response procedures
- Planning and organisational skills sufficient to plan the policy design process, including organising meetings with stakeholders

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing sustainability in the workplace
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of carbon emissions and noise, the cleaning of plant, tools and equipment, and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for managing sustainability in the workplace
- Policy development and implementation processes and practices
- Principles, practices and available tools and techniques of sustainability management
- Quality assurance systems
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Established communication channels and protocols
- Problem identification and resolution strategies
- Types of tools and equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence that they can manage sustainability in the workplace</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing sustainability in the workplace • following organisational policies and procedures relevant to managing sustainability in the workplace • planning, designing and implementing organisational policy to manage sustainability in the workplace that follows legislative requirements • documenting an implementation strategy as part of the policy establishment • communicating with stakeholders to discuss possible approaches to policy development and implementation • reviewing and improving policies by identifying improvements and benchmarking against industry best practice
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills • Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge • Assessment may be applied under project-related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency • The assessment environment should not disadvantage the candidate • Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English • Where the participant has a disability, reasonable adjustment may be applied during assessment • Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work

RANGE STATEMENT

situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements

may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance

RANGE STATEMENT

- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- access and equity principles and practices
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Sustainability may include:

- reduction, recycling or elimination of waste and ecologically incompatible by-products
- elimination of chemical substances or physical agents and conditions that present hazards to human health or the environment
- conservation of energy and materials
- use of forms of energy and materials that are most appropriate to the desired ends
- design of work spaces to minimise or eliminate chemical, ergonomic and physical hazards

Scope of sustainability requirements may include:

- an integrated approach to sustainability which includes environmental, economic and social aspects or a narrower approach which focuses on each aspect individually
- parts of the enterprise to which sustainability is to apply, including whether the focus is on the whole enterprise, one work site, one work area or a number of work sites or work areas
- investigation of the particular business and market context of the industry/enterprise
- addressing sustainability initiatives through reference to standards, guidelines and approaches such as:
 - federal government standards, including five-star rating for all new homes
 - ecological footprinting
 - Energy Efficiency Opportunities Bill
 - Global Report Initiative
 - Green Office Program
 - green purchasing

RANGE STATEMENT

- greenhouse challenge
- environmental management systems
- life cycle analyses
- product stewardship
- supply chain management
- sustainability covenants and compacts
- triple bottom line reporting
- Australian Forest Certification Scheme (AFCS)
- Forest Stewardship Council (FSC)

Stakeholders may include:

- individuals and groups both inside and outside the organisation who have some direct interest in the organisation's conduct, actions, products and services, including:
 - customers
 - employees at all levels of the organisation
 - government
 - investors
 - key personnel within the organisation and specialists outside it who may have particular technical expertise
 - local community
 - other organisations
 - regulators
 - suppliers

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Strategies may include:

- promotional activities
- raising awareness among stakeholders
- training staff in sustainability principles and techniques
- reducing toxic material and hazardous chemical use
- minimising resource use through changes in processes, facility design and management
- supply chain and life cycle management approaches

RANGE STATEMENT

- sourcing renewable energy and low carbon footprint materials
- reducing, re-using and recycling waste
- product and process improvements
- carbon offsets
- reducing greenhouse gas and other emissions
- use of solar or renewable energies and water
- monitoring disposal processes

Resources may include:

- people
- materials
- equipment

Processes may include:

- communication
- monitoring
- reporting
- feedback
- evaluation
- ongoing review

Unit Sector(s)

Not Applicable

Competency field

Competency field	Core
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FPICOR6202A Implement practices to maximise value from wood residues

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to evaluate and implement effective wood management practices that ensure maximum product value recovery and adherence to environmentally sustainable principles

General workplace legislative and regulatory requirements apply to this unit. Subject to enterprise requirements specific licences/certification may be required in the following areas: Forest sustainability certification, Chain of Custody certification

Application of the Unit

Application of the unit The unit involves implementing practices to maximise value from wood and residues in a variety of work settings including

- forest /plantation environment
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- timber and wood products production
- timber and wood products sales and service
- other settings, such as farms, agriculture, workshops, domestic, nursery, local council applications, as applicable to the unit

The skills and knowledge required for competent workplace performance are to be used within the scope of

the person's job and authority

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Develop a value maximisation plan

- 1.1. Applicable ***Occupational Health and Safety (OHS), environmental, legislative and organisational requirements*** relevant to implementing practices to maximise value from wood and wood residue are identified and followed
- 1.2. Management plans and priorities for site are reviewed
- 1.3. Site environmental protection measures are identified and adhered to in line with relevant legislation and regulations

ELEMENT	PERFORMANCE CRITERIA
	1.4. Timeline and budget are established and checked with appropriate personnel
	1.5. Applications and demand for wood and residue material are determined and documented in line with site requirements
	1.6. Product value chain is determined and documented in line with site requirements
	1.7. Consultative processes are used to obtain input to the plan in line with site requirements
	1.8. Most appropriate value maximisation options for the site are determined and documented
2. Determine appropriate value maximisation practices	2.1. Legislative, organisational and best practice parameters governing wood management practices are identified
	2.2. Management plans and priorities for the site are reviewed
	2.3. Most appropriate value maximisation practices for the site are determined
	2.4. Technology, materials and resources required for implementation are defined
	2.5. Value maximisation plan is developed and submitted to the appropriate personnel for approval
3. Implement value maximisation practices	3.1. Value maximisation plan is implemented in line with methodology , schedule, budget and legislative requirements
	3.2. Required technology, materials, resources and authorisations are obtained in line with organisational and legislative requirements
	3.3. Production schedule for the value maximisation plan is communicated to appropriate personnel
	3.4. Processes to monitor implementation of the plan are established
4. Review and improve value maximisation practices	4.1. Value maximisation plan is monitored and reviewed against methodology and production schedule in line with organisational requirements
	4.2. Information and data is analysed to determine effectiveness of the value maximisation practices and improvement opportunities are determined
	4.3. Improvement recommendations are prepared based on information, data analysis and consultative processes
	4.4. Outcomes are recorded and reported to appropriate

ELEMENT**PERFORMANCE CRITERIA**

personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use practices to maximise wood product value and avoid or minimise residue production
- Communication skills sufficient to use consultative, communicative, interpersonal and reporting techniques with colleagues and contractors
- Literacy skills sufficient to prepare and present written and oral information to colleagues and contractors
- Numeracy skills sufficient to analyse qualitative and quantitative information and data
- Problem solving skills sufficient to identify potential uses for wood products; identify market demand; demonstrate time and project management
- Planning and organisational skills sufficient to coordinate the acquisition of required resources, authorisations and approvals; implement management practices

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for implement practices to maximise value from wood products
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for implementing practices to maximise value from wood and residues
- Environmental risks and hazards
- Role of wood or waste products in generating renewable energy through biomass
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Extensive range of wood products, uses, markets and values
- Work practices that avoid or reduce wood residues
- Potential uses for wood residues and by products
- Data collection and analysis methods
- Established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for analysing, estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently implement practices to maximise value of wood products and residues

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to implementing practices to maximise value from wood and residues
- following organisational policies and procedures relevant to implementing practices to maximise value from wood and residues
- practical implementation of practices to maximise value from wood and wood residues

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or

EVIDENCE GUIDE

Australian Standards requirements

- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- fatigue management
- hazard and risk control
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Timeline

- may be critical to the success of the program
- must identify any environmental restrictions such as excessive heat or rain impacting on production

Appropriate personnel may include:

- coordinating or operational personnel
- management
- colleagues
- clients
- relevant groups

Applications

are the uses for wood and residues and may include:

- poles
- piles and bridge timbers
- veneer logs
- saw logs
- chip logs
- charcoal logs
- woody biomass
- structural and non-structural timbers
- timber composites
- timber panel products
- timber engineered products
- carbon storage
- eucalyptus oil

RANGE STATEMENT

Demand

- extractives
- is market demand

and must include assessment of:

- volume
- price
- special process requirements

Product value chain

is a summary of the obtainable products and their market value

Consultative processes may include:

- face-to-face meetings
- telephone
- fax, written and email communication

and may be with:

- clients
- technical operators
- marketing groups
- operational personnel
- colleagues
- relevant groups such as environmental groups
- local, State/Territory and federal government bodies
- internal policy groups

Resources

- are the resources needed to implement the plan

and may include:

- staff
- production
- technical
- subcontractors

Methodology

- is the system of practices to be implemented to maximise value

and may include:

- avoiding production of residues
- reducing the volume of residues
- marketing practices
- sales practices
- new work practices

Authorisations must include:

- permits and licences relating to:
 - sites or properties

RANGE STATEMENT

- hours of operation
- use and application of chemicals
- environmental issues

Production schedule

is the anticipated timing, volume and product range to be produced from an area

Communication

see consultative processes

Monitored may be:

- time-based
- frequency-based
- value-based

Reviewed may include:

- compliance with OHS, legislative and environmental regulations, procedures, practices and precautions
- adherence to site imperatives, specifications, quality and performance targets
- completion and submission of documentation as required

Information and data

- will relate to the operational area and methodologies employed

and may include:

- data
- previous reports
- management information systems data
- marketing
- strategic and business plans, and associated implementation issues

Analysed may include:

- assessment and judgement of:
 - quantitative and qualitative data
 - performance
 - adherence to work practices
 - value judgements

Improvement recommendations

are recommendations for adjustment to practices based on analysis

Records and reports may include:

- results
- costs
- data analysis
- recommendations for future work
- planning and implementation difficulties or issues faced

RANGE STATEMENT

and may be:

- manual
- computer based

Unit Sector(s)

Not Applicable

Competency field

Competency field Core Unit

FPICOT2201B Stack and bind material

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to stack material and apply strapping and wrapping. The unit includes the manual building of packs, and problem identification and reporting

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2201A Stack and bind material

Application of the Unit

Application of the unit The unit involves stacking and binding material in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|--|
| 1. Identify material | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to stacking and binding material are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. <i>Materials</i> for packing are <i>identified</i> in line with site standards and procedures</p> <p>1.4. Materials and pack are <i>inspected and checked for grading, labelling</i> and quality in line with site procedures</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Build packs manually | <p>2.1. Packs are <i>built</i> and <i>bearers checked</i> in line with OHS requirements, site procedures and environmental requirements</p> <p>2.2. Material is <i>confirmed</i> to meet labelled or expected content</p> <p>2.3. <i>Problems or faults</i> are identified and reported to supervisor in line with site procedures</p> <p>2.4. As directed by supervisor, material with faults and damaged/inconsistent bearers are <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.5. Finished packs are <i>labelled</i> in line with site standards</p> <p>2.6. <i>Limitations</i> in building packs are identified and assistance is sought as required in line with site procedures</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Strap and wrap packs	<p>3.1. Finished packs are <i>strapped and wrapped</i> in line with OHS requirements and site standards and procedures</p> <p>3.2. <i>Straps are tightened</i> to prevent component slippage, strap breakage and damage in line with site procedures</p> <p>3.3. Area is regularly cleared of packing and loose material in line with site procedures and environmental requirements</p> <p>3.4. Strapping and wrapping waste material is minimised and <i>dealt with</i> in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>3.5. Production and quality <i>records and reports</i> are completed in line with site standards and procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely build, strap and wrap packs; identify acceptable bearers
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for stacking and binding material; ***confirm*** appropriate labelling
- Numeracy skills sufficient to measure and allocate material sizes; estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for stacking and binding material
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

material (including preservative treated timber) and the cleaning of plant, tools and equipment

- Organisational and site standards, requirements, policies and procedures for stacking and binding material
- Environmental risks and hazards
- Criteria for recycling and re-using material with faults
- Methods of visual estimation, grading, colour identification and tagging
- Industry standard cross sections and length dimensions and tolerances
- Industry standard cross section profiles and names
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently stack and bind material in line with site standards and organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to stacking and binding material
- following organisational policies and procedures relevant to stacking and binding material

EVIDENCE GUIDE

- identifying materials using visual assessment or measurement processes to allocate standard sizes
 - building packs manually following site standards for dimension, component numbers, end and vertical alignment, and bearer quality
 - applying straps and wrapping to packs with a sufficient quality of tension and finish
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency

EVIDENCE GUIDE

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling, including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the stacking and binding of material

and may include:

- type
- size
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to

RANGE STATEMENT

- Appropriate personnel** may include:
- the work
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Materials** may include:
- sawn or dressed finish timber
 - differing timber species
 - preservative treated timber, including water-borne preservatives and light organic solvent preservatives (LOSP)
 - panel types, including laminated veneer, chipboard, fibreboard, medium density fibreboard, and boards made from material other than wood
 - panels with various treatments, coatings and hardware items
 - cross sections and sizes to be stacked, which may include:
 - timber with rectangular and common profile cross sections with industry standard dimensions
 - panels with industry standard thickness and sheet dimensions and hardware sizes as necessary to differentiate between separate stock items
- Identified** may include:
- identifying industry standard sizes by visual estimate or using a measuring tool or other scale
 - identifying industry standard thickness, diameter and cross section by visual estimate or using a measuring tape or gauge
- Inspected and checked for grading and labelling** may include:
- visual estimation
 - confirmation of stress-grading
 - identification and categorisation of standard cross sections and length
 - profile
 - colour identification
 - general information about labelling and tagging
 - pack quality

RANGE STATEMENT

- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Built** relates to:
- building packs from identified material, with required dimensions or number of components, with ends aligned and sides vertical
- Bearers checked** relates to:
- placing specified bearers and spacing sticks squarely, evenly and consistently
 - checking bearers for consistent thickness and damage
- Confirmed** may include:
- material of consistent type, section and length
- Problems or faults** may include:
- identifying and separating material with apparent faults
 - pack quality
 - damaged or inconsistent bearers
- Disposing of** may include:
- recycling material with faults and damaged or inconsistent bearers
 - re-using material with faults and damaged or inconsistent bearers
 - redirecting material with faults and damaged or inconsistent bearers for energy recovery
- Labelled** relates to:
- identifying packs with written information or completed tags
- Limitations** may relate to:
- job role and responsibilities
 - own competency level
 - industry requirements
 - own understanding of risk identification processes
 - own interpretation of maps, legislation, regulations and procedures
 - OHS requirements
 - legal responsibilities
- Strapped and wrapped** may
- applying protective strips to packs

RANGE STATEMENT

include:

- applying wrapping to packs
- placing and finishing wrapping to prevent water penetration during storage and transportation

Straps are tightened using:

- hand-held equipment to a sufficient tension to prevent slippage and damage

Dealing with may include:

- recycling bracing and strapping waste
- sending bracing and strapping waste to landfill

Records and reports may include:

- product type and size
- inspection information
- grading and labelling outcomes
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT2202B Rack material

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to identify, sort and rack hardwood or softwood material. The unit includes verification of material to ensure appropriate quality and separation of material with faults

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2202A Rack material

Application of the Unit

Application of the unit The unit involves racking material in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------|--|
| 1. Prepare to rack material | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to racking <i>material</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Tools and equipment are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations and site procedures</p> <p>1.4. Racking material procedures are identified and assessed for safe working conditions and planned in line with site procedures</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures</p> |
| 2. Identify material | <p>2.1. Type and quantity of material to be racked is identified in line with work order</p> <p>2.2. Round poles are identified by visual estimate or using a measuring tool to meet industry requirements for standard diameter ranges</p> <p>2.3. Sawn or dressed boards are identified by visual estimate or using a measuring tool to meet industry requirements for standard cross sections</p> <p>2.4. Industry requirements for standard lengths of material are identified by visual estimate or using a measuring tool</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Rack material	<p>2.5. Stress grade labels, colour identification marks and other tags are identified and interpreted</p> <p>3.1. Material is racked in line with work order, and environmental and OHS requirements</p> <p>3.2. Material of consistent type, section and length is racked in line with work order requirements</p> <p>3.3. Material with faults is identified, separated and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>3.4. Bearers and spacing sticks are placed squarely, evenly and consistently in line with site procedures</p> <p>3.5. Bearers and spacing sticks are checked for consistent thickness and damage, and disposed of as necessary</p> <p>3.6. Work area is regularly cleared to maintain a safe and efficient workflow in line with site procedures and environmental requirements</p> <p>3.7. Problems associated with racking material processes are rectified or reported for resolution</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; safely rack material to industry and site standards; use suitable bearers and spacing sticks for racking
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace; locate and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for racking material; locate, interpret and apply workplace information and instructions
- Numeracy skills sufficient to apply appropriate mathematical processes to measure material against industry standards for sizing; estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for racking material
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated material) and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for racking material
- Criteria for recycling and re-using material with faults
- Hazards and risks associated with racking material, including environmental hazards and risks
- Range and types of material to be racked
- Industry standard cross section and length dimensions and tolerances
- Industry standard cross section profiles and names
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently:

- identify, sort and rack hardwood or softwood material to industry standards
- separate material with identified faults according to organisational guidelines

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to racking material
- following organisational policies and procedures relevant to racking material
- safely preparing, sorting and racking material to industry standards
- identifying, separating and safely disposing of material with faults

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of

EVIDENCE GUIDE

process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances

RANGE STATEMENT

- Environmental requirements may include:**
- safe forest practices, including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Material may be:**
- hardwood or softwood
 - sawn or dressed finish
 - timber species
 - preservative treated or untreated, with

RANGE STATEMENT

preservative treatment type, including:

- copper chromium arsenate (CCA)
- light organic solvent preservatives (LOSP)
- creosote
- water-borne
- round poles of all industry standard diameter ranges
- rectangular and common profile cross sections with industry standard dimensions and industry standard lengths to a maximum weight and flexibility consistent with manual handling

Work order is to include:

- details of material to be racked
- special client requirements
- production timelines
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- line management

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Disposing of may include:

- recycling material with faults/inconsistent or damaged spacing sticks and bearers
- re-using material with faults/inconsistent or damaged spacing sticks and bearers
- redirecting material with faults/inconsistent or damaged spacing sticks and bearers for energy recovery

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2203B Finish products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to set up and conduct the finishing process and pack products. The unit includes machining and manual or machine coating products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2203A Finish products

Application of the Unit

Application of the unit

The unit involves finishing products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---------------------------------|--|
| 1. Set up production processes | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to finishing <i>products</i> are identified and followed</p> <p>1.2. Products, processes and production requirements are identified in line with site procedures</p> <p>1.3. <i>Tools, equipment</i> and materials are identified, obtained and checked for operational effectiveness in line with production requirements and site procedures</p> <p>1.4. Startup checks are completed on equipment in line with manufacturer recommendations and site procedures</p> <p>1.5. Material is machined in line with setup processes and site requirements</p> <p>1.6. Machined product is checked for faults and setup is altered to rectify identified problems</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Conduct finishing operations | <p>2.1. Material is measured and marked for processing in line with <i>work order</i> and in consultation with <i>appropriate personnel</i></p> <p>2.2. Material is machined and defects are identified, removed and repaired or <i>disposed of</i> in line with site procedures</p> <p>2.3. Equipment faults and routine problems are identified, investigated and resolved</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Coat products	<p data-bbox="572 297 1307 405">2.4. Work area is cleared and waste material disposed of in line with relevant environmental policies and procedures</p> <p data-bbox="572 421 1307 495">3.1. <i>Coating requirements</i> are identified and <i>planned</i>, and coat is selected in line with site procedures</p> <p data-bbox="572 506 1307 613">3.2. Coating area is <i>prepared</i> to provide suitable clean area that minimises surface defects during drying, in line with site procedures</p> <p data-bbox="572 624 1307 698">3.3. Coat is opened, decanted and mixed in line with manufacturer recommendations</p> <p data-bbox="572 710 1307 817">3.4. Coat is applied according to planned <i>method</i> and sequence using equipment in line with manufacturer recommendations and site standards</p> <p data-bbox="572 828 1307 902">3.5. Coat is regularly <i>assessed</i> and <i>faults</i> are identified and removed in line with site standards</p> <p data-bbox="572 913 1307 972">3.6. Products with coat faults are disposed of in line with site procedures and environmental requirements</p>
4. Pack finished products	<p data-bbox="572 994 1307 1137">4.1. Finished items are checked for faults and conformance, <i>segregated</i> and stored in line with workplace procedures and environmental requirements</p> <p data-bbox="572 1149 1307 1223">4.2. Packing requirements are identified from work orders and other related documentation and located</p> <p data-bbox="572 1234 1307 1341">4.3. Finished items are packed in line with site procedures and work orders, using suitable packing materials</p> <p data-bbox="572 1352 1307 1426">4.4. Packaged products are identified and recorded in line with site procedures</p> <p data-bbox="572 1438 1307 1496">4.5. Finishing process is <i>recorded and reported</i> to appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely prepare and apply coats to products

REQUIRED SKILLS AND KNOWLEDGE

- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for finishing fabricated products
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and product faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for finishing products
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for finishing products
- Criteria for recycling and re-using material with defects
- Routine maintenance procedures
- Hazards and risks associated with finishing and coating fabricated products, including environmental hazards and risks
- Established communication channels and protocols
- Problem identification and resolution strategies, common fault finding techniques, and typical product and coat defects
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently:

- set up production processes
- carry out finishing and coating operations
- package finished products according to organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to finishing products
- following organisational policies and procedures relevant to finishing products
- selecting and using appropriate tools, equipment and materials over the full range of processes for finishing fabricated products
- packaging products using the full range of equipment and packaging materials
- coating products ensuring accurate identification and correction of defects and faults

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and

RANGE STATEMENT

may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage

RANGE STATEMENT

- Products** may include:
- requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - laminated items
 - components and items requiring special finishing operations
- Tools and equipment** may include:
- standard or special production tooling drills
 - router bits
 - clamps
 - jigs and templates
 - drill press
 - sanders
 - routers
 - surface planers
 - portable power tools
 - hand tools
 - nail guns
 - pneumatic fastener and saws
 - tooling
 - cambers
 - coating machine
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Work order** may include:
- type, size and quantity of products to be finished and packed
 - drawings
 - packing documentation
 - type of packing material
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work

RANGE STATEMENT

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Disposing of may include:

- recycling material with defects that cannot be repaired, waste material, or products with coat faults
- re-using material with defects that cannot be repaired, waste material, or products with coat faults
- redirecting material with defects that cannot be repaired, waste material, or products with coat faults for energy recovery

Coating may be:

- by machine or manual
- by brush
- by spraying and dipping

Coating requirements may include:

- products, such as paints, sealants, timber stains and primers
- coat characteristics
- colour and finish
- equipment, such as brush and spray equipment, including airless or compressed air-operated

Planned may relate to:

- number of separate coat applications
- number of coats
- coating sequence
- stands and supports to minimise coating time and handling damage

Prepared may relate to:

- product surfaces

and is to include:

- sanding
- rubbing
- scraping
- cleaning by hand

Method may be selected to suit:

- coat
- product
- surface to be coated
- required coat finish
- minimal application time

RANGE STATEMENT

Assessed may cover:

- timber species
- manufactured product type
- surface finish
- cleanliness
- moisture level

Faults may include:

- incomplete cover
- orange peel
- solvent boil
- base product faults
- contamination
- coating defects

Segregating may include:

- recycling finished items with faults or items that do not conform
- re-using finished items with faults or items that do not conform

Records and reports may include:

- tally sheets
- quality sheets and forms
- production sheets and downtime sheets

and may relate to:

- production details
- maintenance details
- breakdowns or equipment faults
- computer problems
- interruptions to production

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT2205B Tail out materials

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to clear sawn or machined materials and waste from a saw or machine while maintaining process flow and checking and sorting the finished product

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2205A Tail out materials

Application of the Unit

Application of the unit The unit involves tailing out materials in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Prepare for cutting or machining process | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to tailing out <i>materials</i> are identified and followed</p> <p>1.2. Work order is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Required finished board sizes and quantities are identified in line with operator and work order</p> <p>1.4. Where multiple cuts are required, sequence of cuts or machining passes are checked with operator and work order</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Maintain process flow | <p>2.1. Flitch, cant or board is <i>controlled</i> to maintain process flow in line with sawing or dressing speed, OHS requirements and production standards</p> <p>2.2. Sawn waste or material is controlled and regularly cleared in line with site procedures and environmental requirements</p> <p>2.3. Flitch, cant or board is assessed for further processing requirements and returned to operator in line with production standards</p> <p>2.4. Work area is regularly cleared in line with site procedures, and OHS and environmental requirements</p> <p>2.5. <i>Problems</i> in flow or processing of materials are identified and reported to operator for resolution</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Sort finished product	<p data-bbox="576 297 1311 405">2.6.As directed by operator, material with faults or defects is <i>disposed of</i> in line with site procedures and environmental requirements</p> <p data-bbox="576 421 1246 495">3.1.Boards are sorted and stacked in line with site procedures and specific operational requirements</p> <p data-bbox="576 506 1270 613">3.2.Boards are assessed for standard sizes by visual estimate or using a measuring tool in line with site procedures</p> <p data-bbox="576 624 1305 732">3.3.<i>Recoverable material</i> and waste are segregated and <i>stored or directed for further processing</i> in line with site procedures</p> <p data-bbox="576 743 1235 848">3.4.Production and quality <i>records and reports</i> are processed in line with site procedures and organisational requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for tailing out material
- Numeracy skills sufficient to use appropriate methods of analysis, assessment and evaluation to tail out materials; sort finished material into required grades and waste from recoverable or finished materials; estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for tailing out materials
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

- material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for tailing out materials
- Environmental risks and hazards
- Criteria for recycling and re-using material with faults or defects
- Industry standard cross section and length dimensions and tolerances
- Tailing out processes and procedures
- Common industry terminology
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently:

- tail out material, demonstrating the correct maintenance of process flow
- sort material according to organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to tailing out materials
- following organisational policies and procedures

EVIDENCE GUIDE

- relevant to tailing out materials
 - safely tailing out material while maintaining process flow
 - identifying processing faults and sorting finished material
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate

EVIDENCE GUIDE

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- timber
- other materials that are solid or manufactured by lamination of boards or veneers
- supervisors
- clients
- colleagues
- line management
- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language

Organisational requirements may include:

Materials may be:

Appropriate personnel may include:

Communication may include:

RANGE STATEMENT

- use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Controlled** may relate to:
- material movement
 - position of the material being sawn or dressed
 - avoiding contact with tail of saw or cutter
 - removing waste
- Problems** may relate to:
- speed of production
 - flow of product
 - sharpness of blades or cutters
 - quality of materials
 - communication
 - housekeeping
 - burn marks
 - rough finish
 - tear out
 - machine marks
 - irregular size of finished product
- Disposing of** may include:
- recycling material with faults or defects
 - re-using material with faults or defects
 - redirecting material with faults or defects for energy recovery
- Recoverable material:**
- is the volume of timber sawn from a resource compared to the volume of that resource
 - is expressed as a percentage (sawn timber volume/initial log volume x 100)
 - maximises the value of the resource
- Storing or directing for further processing** may include:
- recycling segregated recoverable material and waste
 - re-using segregated recoverable material and waste
 - redirecting segregated recoverable material and waste for energy recovery
- Records and reports** may include:
- tally sheets
 - quality sheets and forms
 - production sheets and downtime sheets
- and may relate to:
- production details
 - maintenance details
 - breakdowns or equipment faults

RANGE STATEMENT

- interruptions to production

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT2207B Dress boards and timber

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and dress boards and timber. The unit includes evaluating and monitoring dressing conditions and processes; and setting, adjusting and maintaining equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2207A Dress boards and timber

Application of the Unit

Application of the unit

The unit involves dressing boards and timber in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---------------------------------|---|
| 1. Prepare for dressing process | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to dressing boards and <i>timber</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Machinery and <i>equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.4. Machinery is adjusted to suit size and type of boards or timber to be dressed in line with work order</p> <p>1.5. Pre-operational checks and lock-out procedures are conducted in line with manufacturer recommendations</p> <p>1.6. Required dressed board sizes and quantities, and available material for dressing are identified from work orders, schedules and site procedures</p> <p>1.7. Sequence of machining operations is planned where multiple passes are required</p> <p>1.8. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures</p> |
| 2. Dress boards and timber | <p>2.1. Boards and timber are dressed in line with work order, environmental and OHS requirements, and site procedures</p> <p>2.2. Pre-operational checks and lock-out procedures are</p> |

ELEMENT**PERFORMANCE CRITERIA**

- conducted in line with manufacturer recommendations
- 2.3. Boards and timber are dressed using appropriate equipment in line with site procedures and manufacturer recommendations
- 2.4. Guides, conveyors, speeds and feeds are adjusted to suit dimensions and grade outcomes, and cutting sequence is selected
- 2.5. Boards not meeting processing requirements are identified prior to dressing, and rejected and *disposed of* in line with site procedures
- 2.6. *Work area is regularly cleared* in line with site standards, and environmental and OHS requirements
- 2.7. *Problems* are identified and resolved in line with site procedures
- 2.8. Dressed boards are tallied and monitored against work orders
3. Assess dressing conditions
- 3.1. Dressing conditions are regularly assessed to ensure product quality, continuity of supply and processing in line with site standards and procedures
- 3.2. Dressing feed rates and finish are evaluated to determine board size, timber condition and other relevant characteristics in line with site procedures
- 3.3. Dressed board dimensions and profiles are regularly measured and recorded in line with site procedures
- 3.4. Routine processing and equipment *faults* are recognised and resolved or reported in line with site procedures
4. Maintain simple dressing processes
- 4.1. Dressing conditions are adjusted to optimise feed rate and finish and to maintain finished dimensions, in line with work order and site standards
- 4.2. Equipment lock-out procedures are applied in line with OHS requirements and site procedures
- 4.3. Equipment is *maintained* in line with OHS requirements, site procedures, manufacturer recommendations and environmental requirements
- 4.4. Problems and faults are identified, resolved and reported in line with site procedures
- 4.5. Blunt cutters or saw blades are *dealt with* in line with site procedures, manufacturer recommendations and environmental requirements
- 4.6. Production and quality *records and reports* are

ELEMENT**PERFORMANCE CRITERIA**

processed in line with site procedures and organisational requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, including to carry out lock-out procedures; efficiently and safely dress boards and timber at optimum rate and finish quality; conduct lock-out procedures
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace; locate, record and report information
- Literacy skills sufficient to comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for dressing boards and timber
- Numeracy skills sufficient to apply mathematical processes to measure finished dimensions and profiles with accuracy appropriate to tolerances; estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for dressing boards and timber
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for dressing boards and timber
- Environmental risks and hazards
- Recycling and re-using procedures for dressed boards not meeting processing requirements
- Typical timber defects and dressing problems which require action to be taken
- Industry standard cross section and length dimensions and tolerances, profiles and terminology
- Purpose of lock-out procedures
- Established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently:

- dress boards and timber
- maintain equipment in line with organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to dressing boards and timber
- following organisational policies and procedures relevant to dressing boards and timber
- communicating and working safely with others in the work area
- preparing for, evaluating and maintaining dressing processes and conditions
- setting, adjusting, operating and maintaining equipment to suit required dimensions, cutting sequence, feed rates and finish

Context of and specific resources for

- Competency is to be assessed in the workplace or

EVIDENCE GUIDE

assessment

realistically simulated workplace

- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment

EVIDENCE GUIDE

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy

RANGE STATEMENT

- Organisational requirements** may include:
- OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Timber** may be:
- softwood or hardwood
 - treated or untreated
 - planed or sized along its length
 - cross sections produced to standard industry profiles within the enterprise's normal range
- Work order** is to include:
- details of material to be dressed
 - special client requirements
 - production timelines
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
- Equipment** may include:
- moulder

RANGE STATEMENT

- jointer/buzzer or thicknesser
 - machine incorporating splitting saw
 - planing machine
 - moulding machine
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Disposing of** may include:
- recycling boards identified as not meeting processing requirements prior to dressing
 - re-using boards identified as not meeting processing requirements prior to dressing
 - redirecting boards identified as not meeting processing requirements prior to dressing for energy recovery
- Regularly clearing work area** may include:
- area around equipment and conveyors
 - clearing timber scraps around equipment and conveyors
 - monitoring conveyors for material flow problems
- Problems** may relate to:
- equipment faults and malfunctions
 - quality of product and machine settings
 - efficient rejection prior to dressing of boards that do not meet processing requirements
 - transfer and flow of material
 - dressing problems
 - feed rate
 - product finish
- Faults** may include:
- blunt or damaged cutters
 - inadequate supply of materials
 - disruption to continuity of flow
 - sub-optimal production rate and finish
 - finished dimensions
 - burn marks
 - end damage

RANGE STATEMENT

- poor surface finish
 - extra cuts
 - excessive cutter marks
 - dimensional errors
- Maintenance** may include:
- cleaning machine of wood chips and sawdust
 - replacing blunt cutters or saw blades
 - inspecting machine parts for wear or damage (including guards)
 - greasing and lubricating moving parts
 - checking the operation of emergency stop buttons and lock-out systems
- Dealing with** may include:
- repairing or sending for repair blunt cutters or saw blades
 - recycling blunt cutters or saw blades that cannot be repaired
 - sending blunt cutters or saw blades that cannot be repaired to landfill
- Records and reports** may include:
- tally sheets
 - quality sheets and forms
 - production sheets and downtime sheets
- and may relate to:
- production details
 - maintenance details
 - breakdowns or equipment faults
 - computer problems
 - interruptions to production
- and may be:
- manual
 - computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2208B Resaw boards and timber

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and produce boards by resawing larger boards. This unit includes adjusting and maintaining sawing equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2208A Resaw boards and timber

Application of the Unit

Application of the unit

The unit involves resawing boards and timber in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for operation	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to resawing <i>boards</i> and <i>timber</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Machinery and <i>equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.4. Machinery is adjusted to suit size and type of boards/timber to be processed in line with work order instructions</p> <p>1.5. Pre-operational checks and lock-out procedures are conducted in line with manufacturer recommendations</p> <p>1.6. Required sawn board sizes and quantities and available material for sawing are identified from work order, schedules and site procedures</p> <p>1.7. Sequence of cuts is planned where multiple cuts are required</p> <p>1.8. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Produce boards	<p>2.1. Boards and timber are sawn in line with work order, and environmental and OHS requirements</p> <p>2.2. Boards and timber are sawn using appropriate equipment in line with manufacturer</p>

ELEMENT**PERFORMANCE CRITERIA**

- recommendations, and OHS and site requirements
- 2.3.Saws, carriage and feeds are adjusted to suit dimensions and cutting sequence selected
- 2.4.Product quality, finish and material flow are maximised through *cutting processes* in line with OHS requirements, work order and site procedures
- 2.5.*Work area is regularly cleared* in line with site standards, and environmental and OHS requirements
- 2.6.*Problems* are identified and resolved in line with site procedures
- 2.7.Damaged sawn material is *disposed of* in line with site procedures and environmental requirements
- 2.8.Sawn material is tallied and monitored against work order
3. Maintain sawing conditions
- 3.1.Sawing conditions are regularly assessed and adjusted to optimise feed rate and finish in line with OHS requirements, site standards and procedures
- 3.2.Sawing feed rates and finish are evaluated to determine board size, timber species and condition in line with site procedures
- 3.3.Cross section dimensions of sawn boards are regularly monitored against standard sizes and tolerances, and sawing process is adjusted as required
- 3.4.Routine sawing and equipment *faults* are recognised and resolved or reported in line with site procedures
- 3.5.Equipment is *maintained* in line with OHS requirements, site procedures, manufacturer recommendations and environmental requirements
- 3.6.Blunt cutters or saw blades are *dealt with* in line with site procedures, manufacturer recommendations and environmental requirements
- 3.7.Equipment lock-out procedures are applied in line with OHS requirements and site procedures
- 3.8.Production and quality *records and reports* are processed in line with site procedures and organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, including to carry out lock-out procedures; safely saw boards and timber at optimum rate and finish
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for resawing boards and timber
- Numeracy skills sufficient to apply mathematical processes to measure sawn dimensions with accuracy appropriate to tolerances; estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for resawing boards and timber
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for resawing boards and timber
- Environmental risks and hazards
- Criteria for recycling and re-using damaged sawn material
- Industry standard cross section and length dimensions and tolerances
- Typical cutting patterns
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently:

- resaw boards and timber
- maintain sawing conditions and equipment according to organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to resawing boards and timber
- following organisational policies and procedures relevant to resawing boards and timber
- communicating and working safely with others in the work area
- preparing for, monitoring and maintaining sawing processes and conditions to produce boards at an appropriate finish and volume
- operating and maintaining equipment to suit required dimensions, cutting sequence, feed rates and finish
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit

Context of and specific resources for assessment

EVIDENCE GUIDE

Method of assessment

- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work

RANGE STATEMENT

situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance

Organisational requirements may include:

RANGE STATEMENT

- procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Boards** may be produced by:
- resawing larger boards, for example, recovering boards from one edge at each pass
 - splitting a larger board into two or more sections
- Timber** may be:
- solid
 - manufactured by lamination of boards or veneers
- Work order** is to include:
- details of material to be resawn
 - special client requirements
 - production timelines
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
- Equipment** may include:
- simple saw benches necessitating significant manual handling, to more complex handling arrangements using conveyor systems to transfer and position material
 - circular or band saws
 - single or multiple saws
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative

RANGE STATEMENT

- language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Cutting processes** involve:
- adjusting saws, carriage and feeds to suit dimensions and cutting sequence selected
- Regularly clearing work area** may include:
- area around equipment and conveyors
 - clearing timber scraps around equipment and conveyors
 - regularly monitoring conveyors for material flow problems
- Problems** may relate to:
- equipment faults and malfunctions
 - quality of product and machine settings
 - transfer and flow of material
 - routine sawing problems
 - feed rate and product finish
 - infeed and outfeed systems
 - damage to sawn board
 - damage to saw blade
 - timber positioning
- Disposing of** may include:
- recycling damaged sawn material
 - re-using damaged sawn material
 - redirecting damaged sawn material for energy recovery
- Faults** may include:
- blunt or damaged saw blade
 - problems with the carriage or feeds
 - inadequate supply of materials
 - disruption to continuity of flow
 - sub-optimal production rate and finish
- Maintenance** may include:
- cleaning the machine of wood chips and sawdust
 - replacing blunt cutters or saw blades
 - inspecting machine parts for wear or damage (including guards)
 - greasing and lubricating moving parts
 - checking the operation of emergency stop buttons and lock-out systems
- Dealing with** may include:
- repairing or sending for repair blunt cutters or saw blades
 - recycling blunt cutters or saw blades that cannot be repaired

RANGE STATEMENT

- Records and reports** may include:
- sending blunt cutters or saw blades that cannot be repaired to landfill
 - tally sheets
 - quality sheets and forms
 - production sheets and downtime sheets
- and may relate to:
- production details
 - maintenance details
 - breakdowns or equipment faults
 - computer problems
 - interruptions to production
- and may be:
- manual
 - computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2209B Produce finger jointed timber

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to produce finger jointed timber, including preparing and mixing glue and maintaining production processes to ensure quality and continuity of supply

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2209A Produce finger jointed timber

Application of the Unit

Application of the unit The unit involves producing finger jointed timber in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for operation	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to producing <i>finger jointed timber</i> are identified and followed</p> <p>1.2. Work order is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is checked, adjusted where necessary, and operated in line with manufacturer recommendations and site procedures</p> <p>1.4. <i>Glue requirements</i> are identified and glue is mixed to ensure minimum wastage in line with site standards, and OHS and environmental requirements</p> <p>1.5. Excess material is disposed of in line with relevant environmental policies and requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Start jointing process	<p>2.1. <i>Materials</i> are prepared and samples checked in line with site procedures and OHS requirements</p> <p>2.2. Sub-standard samples are <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.3. Pre-operational checks and lock-out procedures are conducted in line with manufacturer recommendations</p>

ELEMENT	PERFORMANCE CRITERIA
3. Maintain production flow	<p>2.4. <i>Jointing process</i> is commenced in line with site standards and procedures, and OHS requirements</p> <p>2.5. Finished joints are checked for strength and appearance in line with site quality standards</p> <p>2.6. <i>Problems</i> are identified and settings adjusted as required in line with site procedures</p> <p>3.1. Jointing process is run automatically and correct operation of all sections is checked in line with site procedures and OHS requirements</p> <p>3.2. Processes are regularly <i>monitored</i> to ensure product quality, continuity of supply, and processing in line with site standards and procedures</p> <p>3.3. Routine processing and equipment <i>faults</i> are recognised and resolved or reported in line with site procedures</p> <p>3.4. Blunt or damaged cutters are identified and <i>dealt with</i> in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>3.5. Sub-standard product is disposed of in line with site procedures and environmental requirements</p> <p>3.6. Work area is regularly cleared in line with site standards, and environmental and OHS requirements</p> <p>3.7. Production and quality <i>records and reports</i> are processed in line with site procedures and organisational requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; conduct lock-out procedures; efficiently and safely handle, mix, cure and apply glue
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of

REQUIRED SKILLS AND KNOWLEDGE

practice and established safe practices and procedures for producing finger jointed timber

- Numeracy skills sufficient to estimate, measure and calculate strengths, tolerances, quantities and time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing finger jointed timber
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing finger jointed timber
- Environmental risks and hazards
- Criteria for recycling and re-using sub-standard product
- Types of glue, and procedures and standards for mixing, curing and applying it
- Industry standard cross sections, and their strength and tolerances
- Purpose of lock-out procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce finger jointed timber, including the

EVIDENCE GUIDE

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>preparation of glue according to organisational guidelines</p> <p>The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to producing finger jointed timber • following organisational policies and procedures relevant to producing finger jointed timber • communicating and working safely with others in the work area • identifying required quantities of glue, and mixing, applying and curing glue to industry standards • maintaining continuity of processing flow and resolving problems
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills

EVIDENCE GUIDE

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment

RANGE STATEMENT

- fire fighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - manual handling including shifting, lifting and carrying
- Environmental requirements may include:**
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

- Finger jointed timber** may cover:
- the full range of board cross sections jointed and finger profiles used by the enterprise
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line managers
- Equipment** may include:
- that used for glue mixing and preparation
 - finger jointing machine stations and equipment
 - conveyors
- Glue requirements** may include:
- glue quantities determined from scheduled requirements
 - glue-handling requirements and precautions
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Materials** may include:
- identifying and confirming cross section of cleats/shooks to match finger jointing machine setup
 - loading cleats/shooks to conveyor
 - feeding cleats/shooks to jointing operation
 - machining fingers on sample cleats/shooks
 - curing glue
 - checking and adjusting settings for glue curing
 - applying glue to sample cleats/shooks
 - joining sample cleats/shooks
- Disposing of** may include:
- recycling sub-standard samples/sub-standard product
 - re-using sub-standard samples/sub-standard product
 - redirecting sub-standard samples/sub-standard product for energy recovery
- Jointing process** may include:
- loading cleats/shooks to conveyor
 - feeding cleats/shooks to jointing operation

RANGE STATEMENT

Problems may relate to:

- machining fingers on cleats/shooks
- curing and applying glue
- equipment faults and malfunctions
- glue mix, curing and application
- loading of cleats/shooks
- quality of product
- machine settings

Monitored includes:

- regular monitoring of processes to ensure continuity of production, including recognising and rectifying blunt or damaged cutters
- loading
- supplying and feeding cleats/shooks
- rejecting cleats/shooks not meeting grading requirements
- regularly checking
- cleaning and filling glue spreader
- making adjustments to machine settings, equipment and materials as required
- coordinating cleats/shooks
- docking finished boards with others to ensure continuous supply

Faults may include:

- blunt or damaged cutters
- cleats/shooks or product not meeting grading requirements
- inadequate supply of materials
- disruption to continuity of flow
- sub-optimal production rate and finish

Dealing with may include:

- reporting blunt or damaged cutters for repair or replacement
- recycling blunt or damaged cutters that cannot be repaired
- re-using blunt or damaged cutters that have been repaired

Records and reports may include:

- tally sheets
- quality sheets and forms
- production sheets and downtime sheets

and may relate to:

- production details
- maintenance details
- breakdowns or equipment faults

RANGE STATEMENT

- computer problems
- interruptions to production

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2210B Tally material

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and record manual or electronic tallies of finished packs of material

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2210A Tally material

Application of the Unit

Application of the unit

The unit involves tallying material in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for tallying	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>tallying material</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Suitable <i>personal protective equipment and clothing</i> are selected, used and maintained</p> <p>1.4. Potential and existing risks and <i>hazards</i> in the work area are identified and controlled in line with site procedures, environmental and OHS requirements</p> <p>1.5. Location of material to be tallied is identified and <i>access arrangements</i> are made in line with workplace procedures</p> <p>1.6. Tallying procedures are planned in line with work order and to ensure continuous workflow</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures</p>
2. Record piece or pack details	<p>2.1. Material is tallied in line with work order, environmental and OHS requirements and site procedures</p> <p>2.2. Supply of tally sheets, bar coding material or other documents is monitored and replaced as required</p> <p>2.3. Pieces or <i>packs</i> are counted, and legibly and accurately recorded in the required format</p> <p>2.4. Packs are checked to ensure conformance to relevant specifications</p>

ELEMENT**PERFORMANCE CRITERIA**

- 2.5. Work area is regularly cleared to maintain a safe and efficient workflow in line with site procedures and environmental requirements
- 2.6. Operational problems, non-conformances and damaged material are identified and reported
- 2.7. Tallying results are accurately *reported and recorded* in line with site procedures and organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to visually identify material and pack types; safely handle material to be tallied
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for tallying material; clearly and accurately record tallied details; interpret and apply common industry terminology
- Numeracy skills sufficient to accurately tally material; select appropriate mathematical processes to calculate timber volumes or lineal metres in a pack
- Problem solving skills sufficient to review and identify work requirements; identify problems; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for tallying material
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for tallying material
- Hazards and risks associated with tallying material, including environmental hazards and risks
- Industry standard sizing and names for timber, timber profiles and boards

REQUIRED SKILLS AND KNOWLEDGE

- Relevant packing standard specifications
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently:

- measure and conduct tallies of different types of material
- record counts clearly and accurately according to organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to tallying material
- following organisational policies and procedures relevant to tallying material
- tallying material
- selecting and using appropriate mathematical procedures to calculate tallies
- accurately and clearly recording material tallies and maintaining workplace information

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards

RANGE STATEMENT

- confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Tallying** may be:
- manual (tally sheets)
 - electronic (bar coding)
 - for the purpose of cyclic or periodic stocktaking
- Material** may include:
- timber
 - hardware items and fittings, such as nail plates and fasteners
- Work order** may include:
- details of material to be tallied (product type or packs, categories of product)
 - access arrangements
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management

RANGE STATEMENT

Personal protective equipment and clothing may include:

- safety helmet
- high visibility clothing
- steel-capped boots
- ear protection
- gloves
- eye protection
- sun and wind protection

Hazards may include:

- repetitive movements in manual handling
- excessive noise from machinery
- timber or other debris cluttering work area
- strapping
- sharp edges
- possibility of strap breaking while tensioning

Access arrangements include:

- advising appropriate personnel, including those working in the area, of location in which material will be tallied

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Packs may include:

- random timber cross sections, lengths or panel sizes
- set timber cross sections, lengths or panel sizes

Records and reports may include:

- production records
- quality and accounting records
- tally sheets
- QA forms

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2211B Produce pointed timber products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and conduct pointing operations of hardwood and softwood material using cutter or saw type machinery

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2211A Produce pointed timber products

Application of the Unit

Application of the unit

The unit involves producing pointed timber products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------------|--|
| 1. Prepare for pointing operation | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to producing pointed timber products are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Machinery and <i>equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.4. Machinery is adjusted to suit size and type of timber to be processed in line with work order</p> <p>1.5. Pre-operational checks and lock-out procedures are conducted in line with manufacturer recommendations</p> <p>1.6. Pointing operations are assessed for safe work conditions and planned in line with site procedures and environmental requirements</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Maintain pointing operation | <p>2.1. Pointing operation is conducted in line with work order, and environmental and OHS requirements</p> <p>2.2. <i>Posts</i> and pegs are produced at <i>optimal rate</i> consistent with material type, acceptable surface finish and equipment capability</p> <p>2.3. Pointing operation is monitored to ensure consistency of product dimension, quality and finish</p> |

ELEMENT**PERFORMANCE CRITERIA**

- that are in line with industry and site standards
- 2.4. Shaving and sawdust removal system is routinely monitored to ensure waste material is *effectively controlled*
- 2.5. Supply of material is coordinated with appropriate personnel and timber faults are identified and reported in line with site procedures
- 2.6. Finished products are sorted and processed in line with site procedures
- 2.7. Routine operational problems are recognised, rectified or reported for resolution
3. Shut down operation
- 3.1. Pointing operation is shut down in line with manufacturer recommendations
- 3.2. Equipment is cleaned, maintained and stored in line with manufacturer recommendations and environmental requirements
- 3.3. Malfunctions, faults, wear and damage to equipment are reported for repair or replacement
- 3.4. Machinery and equipment *maintenance* requirements are identified and carried out in line with manufacturer recommendations and environmental requirements
- 3.5. Work area is cleared and waste material *disposed of* in line with site environmental management policies and procedures
- 3.6. Pointing operation outcomes are *recorded and reported* in line with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; set up, operate and shut down pointing equipment for a range of materials; conduct lock-out procedures
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report

REQUIRED SKILLS AND KNOWLEDGE

information

- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for producing pointed timber products
- Numeracy skills sufficient to select appropriate mathematical processes to calculate and order the timber to be pointed; produce pointed products to order specifications; estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing pointed timber products
- Environmental protection requirements, including the safe disposal of waste material, minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing pointed timber products
- Environmental risks and hazards
- Pointing procedures and processes
- Purpose of lock-out procedures
- Types of timber faults and defects
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently:

- set up and maintain machinery and equipment
- demonstrate an understanding of the materials and procedures required to produce pointed timber products according to organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to producing pointed timber products
- following organisational policies and procedures relevant to producing pointed timber products
- applying mathematical procedures to calculate and order timber to be pointed
- setting up and operating machinery and equipment to produce pointed timber products within the required tolerances
- monitoring and maintaining pointing operations
- maintaining machinery and equipment, including removing and replacing cutters or saw blades and carrying out shutdown and lock-out procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- details of material to be pointed
- special client requirements
- production timelines

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- line managers

Equipment may be:

- manually loaded
- rotating cutters and saws

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Posts may be:

- round poles covering the full range of sizes for which the equipment is suitable
- rectangular sawn material covering the full range of sizes for which the equipment is suitable

Optimal rate includes:

- planning to achieve the most from the production of posts and pegs

RANGE STATEMENT

- Effectively controlled** may include:
- ensuring environmental requirements are central to this planning process
 - containing waste material
 - minimising waste material sent to landfill
 - ensuring waste material is not contaminated so where possible it can be effectively recycled
- Maintenance** may include:
- cleaning the machine of wood chips and sawdust
 - replacing blunt cutters or saw blades
 - inspecting machine parts for wear or damage, including guards
 - greasing and lubricating moving parts
 - checking the operation of emergency stop buttons and lock-out systems
- Disposing of** may include:
- recycling waste material
 - re-using waste material
 - redirecting waste material for energy recovery
- Records and reports** may include:
- tally sheets
 - quality sheets and forms
 - production sheets and downtime sheets
- and may be:
- manual
 - computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2212B Grade hardwood sawn and milled products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to visually evaluate hardwood sawn and milled product characteristics for classification into various strength and appearance grades. It includes sorting hardwood into classifications and marking material in line with grade type

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2212A Grade hardwood sawn and milled products

Application of the Unit

Application of the unit

The unit involves grading hardwood sawn and milled products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for grading	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to grading hardwood sawn and milled products are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>sawn and milled products</i> to be graded are acquired from <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations and site procedures</p> <p>1.5. Grading process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures</p>
2. Grade products	<p>2.1. Sawn and milled product requirements for storage or subsequent processing operations are selected</p> <p>2.2. <i>Size</i> of sawn and milled products is visually assessed in line with industry standards and number of <i>ranges</i> estimated</p> <p>2.3. Material <i>characteristics</i> of each product are</p>

ELEMENT**PERFORMANCE CRITERIA**

- evaluated against industry standards for grade type
- 2.4. **Moisture content** is measured and evaluated against standards and seasoning requirements
- 2.5. Characteristics are clearly marked for docking in line with site requirements
- 2.6. Material is sorted in line with its grade classification and clearly marked with markers or stickers
- 2.7. Sub-standard material is rejected and **disposed of** in line with site requirements
- 2.8. Grading outcomes and distribution problems are **recorded and reported** in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant equipment; grade hardwood sawn and milled products
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for grading hardwood sawn and milled products
- Numeracy skills sufficient to estimate, measure and calculate size and moisture content of sawn and milled material and time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for grading hardwood sawn and milled products
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

grading hardwood sawn and milled products

- Environmental risks and hazards
- Criteria for recycling and re-using sub-standard material
- Methods of visual estimation, grading, colour identification and tagging
- Sorting, marking and distribution processes
- Industry standard cross sections and lengths
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently grade hardwood sawn and milled products in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to grading hardwood sawn and milled products
- following organisational policies and procedures relevant to grading hardwood sawn and milled products
- grading a full range of hardwood sawn and milled

EVIDENCE GUIDE

Context of and specific resources for assessment

products in readiness for storage or processing

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the receipt, despatch and grading of sawn and milled products to and from the designated storage location or processing
- and may include:
- type
 - size
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues

RANGE STATEMENT

Sawn and milled products must be:

- managers
- hardwood

and may include:

- strip flooring
- light decking
- parquet flooring
- lining boards
- dress boards
- joinery
- mouldings
- cladding
- fascia
- barge boards
- sawn boards for feed stocks
- overlay strip flooring
- furniture components

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- measuring equipment
- moisture meters
- lifting equipment for the movement of sawn and milled products

Communication may include:

- verbal and non-verbal language

RANGE STATEMENT

- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- a range of sizes for standard cross sections and length of sawn and milled products

Size is to include:

Range

is the number of classifications or grades sawn and milled products are sorted into, based on cross section or length

Characteristics may include:

- warp
- wane
- curvature
- shakes
- insect defects
- knots
- resin pockets

Moisture content

is the amount of moisture maintained in sawn and milled products before and after kiln drying to avoid cracking and deforming

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material
- redirecting sub-standard material for energy recovery

Records and reports may include:

- product type and size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system

RANGE STATEMENT

- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2213B Grade softwood sawn and milled products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to visually evaluate softwood sawn and milled product characteristics for classification into various appearance grades. It includes sorting softwood into classifications and marking material in line with grade type

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2213A Grade softwood sawn and milled products

Application of the Unit

Application of the unit

The unit involves grading softwood sawn and milled products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------|--|
| 1. Prepare for grading | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to grading softwood sawn and milled products are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>sawn and milled products</i> to be graded are acquired from <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations and site procedures</p> <p>1.5. Grading process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures</p> |
| 2. Grade products | <p>2.1. Sawn and milled product requirements for storage or subsequent processing operations are selected</p> <p>2.2. <i>Size</i> of sawn and milled products is visually assessed in line with industry standards and number of <i>ranges estimated</i></p> <p>2.3. Material <i>characteristics</i> of each product are</p> |

ELEMENT**PERFORMANCE CRITERIA**

- evaluated against industry standards for grade type
- 2.4. **Moisture content** is measured and evaluated against standards and seasoning requirements
- 2.5. Characteristics are clearly marked for docking in line with site requirements
- 2.6. Material is sorted in line with its grade classification and clearly marked with markers or stickers
- 2.7. Sub-standard material is rejected and **disposed of** in line with site requirements
- 2.8. Grading outcomes and distribution problems are **recorded and reported** in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; safely grade softwood sawn and milled products
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for grading softwood sawn and milled products
- Numeracy skills sufficient to estimate, measure and calculate sizes and moisture content of sawn and milled products and time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for grading softwood sawn and milled products
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

grading softwood sawn and milled products

- Environmental risks and hazards
- Criteria for recycling and re-using sub-standard material
- Methods of visual estimation, grading, colour identification and tagging
- Sorting, marking and distribution processes
- Industry standard cross sections and lengths
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently grade softwood sawn and milled products in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to grading softwood sawn and milled products
- following organisational policies and procedures relevant to grading softwood sawn and milled products
- grading a full range of softwood sawn and milled

EVIDENCE GUIDE

Context of and specific resources for assessment

products in readiness for storage or processing

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the receipt, despatch and grading of sawn and milled products to and from the designated storage location or processing
- and may include:
- type
 - size
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues

RANGE STATEMENT

Sawn and milled products must be:

- managers
- softwood

and may include:

- strip flooring
- light decking
- parquet flooring
- lining boards
- dress boards
- joinery
- mouldings
- cladding
- fascia
- barge boards
- sawn boards for feed stocks
- overlay strip flooring
- furniture components

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- measuring equipment
- moisture meters
- lifting equipment for the movement of sawn and milled products

Communication may include:

- verbal and non-verbal language

RANGE STATEMENT

- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- a range of sizes for standard cross sections and length of sawn and milled products

Size is to include:

Range

is the number of classifications or grades sawn and milled products are sorted into, based on cross section or length

Characteristics may include:

- warp
- wane
- curvature
- shakes
- insect defects
- knots
- resin pockets

Moisture content

is the amount of moisture in timber

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material
- redirecting sub-standard material for energy recovery

Records and reports may include:

- product type and size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2214B Grade cypress sawn and milled products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to visually evaluate cypress sawn and milled product characteristics for classification into various strength and appearance grades. It includes sorting cypress into classifications and marking material in line with grade type

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2214A Grade cypress sawn and milled products

Application of the Unit

Application of the unit

The unit involves grading cypress sawn and milled products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for grading	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to grading cypress sawn and milled products are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>sawn and milled products</i> to be graded are acquired from <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations and site procedures</p> <p>1.5. Grading process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures</p>
2. Grade products	<p>2.1. Sawn and milled product requirements for storage or subsequent processing operations are selected</p> <p>2.2. <i>Size</i> of sawn and milled products is visually assessed in line with industry standards and number of <i>ranges</i> estimated</p> <p>2.3. Material <i>characteristics</i> of each product are</p>

ELEMENT**PERFORMANCE CRITERIA**

- evaluated against industry standards for grade type
- 2.4. **Moisture content** is measured and evaluated against standards and seasoning requirements
- 2.5. Characteristics are clearly marked for docking in line with site requirements
- 2.6. Material is sorted in line with its grade classification and clearly marked with markers or stickers
- 2.7. Sub-standard material is rejected and **disposed of** in line with site requirements
- 2.8. Grading outcomes and distribution problems are **recorded and reported** in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely grade cypress sawn and milled products
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for grading cypress sawn and milled products
- Numeracy skills sufficient to estimate, measure and calculate sizes and time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for grading cypress sawn and milled products
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

grading cypress sawn and milled products

- Environmental risks and hazards
- Criteria for recycling and re-using sub-standard material
- Methods of visual estimation, grading, colour identification and tagging
- Sorting, marking and distribution processes
- Industry standard cross sections and lengths
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently grade cypress sawn and milled products in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to grading cypress sawn and milled products
- following organisational policies and procedures relevant to grading cypress sawn and milled products
- grading a full range of cypress sawn and milled

EVIDENCE GUIDE

Context of and specific resources for assessment

products in readiness for storage or processing

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the receipt, despatch and grading of sawn and milled products to and from the designated storage location or processing
- and may include:
- type
 - size
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues

RANGE STATEMENT

- Sawn and milled products** must include:
- managers
 - cypress
- Storage locations** may include:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** may include:
- measuring equipment
 - moisture meters
 - lifting equipment for the movement of sawn and milled products
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Size** is to include:
- a range of sizes for standard cross sections and length of sawn and milled products
- Range** is the number of classifications or grades sawn and milled products are sorted into based on cross

RANGE STATEMENT

- Characteristics** may include:

 - section or length
 - warp
 - wane
 - curvature
 - shakes
 - insect defects
 - knots
 - resin pockets

- Moisture content** is the amount of moisture maintained in sawn and milled products before and after kiln drying to avoid cracking and deforming

- Disposing of** may include:

 - recycling sub-standard material
 - re-using sub-standard material
 - redirecting sub-standard material for energy recovery

- Records and reports** may include:

 - product type and size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions

and may be:

 - manual
 - computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2215B Visually stress grade hardwood

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to visually stress grade hardwood by testing material for strength and durability against set classifications

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2215A Visually stress grade hardwood

Application of the Unit

Application of the unit The unit involves visually stress-grading hardwood in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------|---|
| 1. Prepare for stress-grading | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to visually stress-grading hardwood are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. <i>Grading</i> requirements are identified in line with site procedures, <i>standards</i> and specifications</p> <p>1.4. Materials, hardware items, tools and <i>equipment</i> requirements are identified from work order and obtained in line with workplace procedures</p> <p>1.5. <i>Hardwood</i> to be graded is positioned to provide appropriate access and facilitate efficient workflow</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures</p> |
| 2. Evaluate hardwood | <p>2.1. <i>Species</i> is identified and status of <i>seasoning</i> is checked in line with site procedures</p> <p>2.2. Size and <i>tolerance</i> measurements are recorded accurately in line with site requirements</p> <p>2.3. <i>Characteristics</i> are established and evaluated in line with standards and product specifications</p> <p>2.4. <i>Moisture content</i> is checked, measured and evaluated against standards and <i>seasoning</i> requirements</p> |
| 3. Grade hardwood | <p>3.1. Hardwood is visually stress graded based on grading standards and criteria in line with required <i>structural</i></p> |

ELEMENT**PERFORMANCE CRITERIA***grade*

- 3.2. Characteristics with the greatest limiting effect on the grade are diagnosed and checked
- 3.3. *Appearance* criteria are assessed and timber is marked, segregated and *disposed of* in line with site procedures and environmental requirements
- 3.4. Results of grading are *recorded and reported* in line with workplace procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to identify and apply correct methods and procedures when preparing, evaluating and grading hardwood; use and maintain relevant tools, machinery and equipment; efficiently and safely visually stress grade hardwood
- Communication skills sufficient to use effective communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures when visually stress-grading hardwood; access, identify and apply information relevant to hardwood grading
- Numeracy skills sufficient to estimate, measure and calculate sizes and time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems, malfunctions and defects; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for visually stress-grading hardwood
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber)
- Organisational and site standards, requirements, policies and procedures for visually stress-grading hardwood
- Environmental risks and hazards
- Criteria for recycling and re-using timber with inappropriate defects or contamination

REQUIRED SKILLS AND KNOWLEDGE

- Visual stress-grading techniques
- Grading markings and standards
- Methods of visual inspection
- Characteristics and properties of hardwood
- Stress-grading equipment calibration and grade thresholds
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can visually grade hardwood by following stress-grading rules and regulations

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to visually stress-grading hardwood
- following organisational policies and procedures relevant to visually stress-grading hardwood
- preparing for stress-grading, including accurately interpreting grading requirements
- stress-grading hardwood in readiness for storage or

EVIDENCE GUIDE

Context of and specific resources for assessment

processing

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for visually stress-grading material
- and may include:
- type
 - width
 - length
 - thickness
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues

RANGE STATEMENT

- Grading is to include:**
- managers
 - visually evaluating material characteristics for classification into various strength and structural grades
- Standards may include:**
- Australian Standards
 - requirements established by the client
 - requirements established by the producer
- Equipment may include:**
- vernier callipers
 - profile gauges
 - moisture meters (resistance and capacitance)
 - tapes
 - marking implements
- Hardwood:**
- usually comes from trees with leaf foliage and has large tube-like vessels or pores consisting of short stubby cells varying in size
- and may include:
- native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - preservative treated timber
- Communication may include:**
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Species may include:**
- native species
 - imported species
- Seasoning** is the process of drying timber either with kilns or air-drying methods
- Tolerance** is the enterprise-accepted deviation from the perfect specifications
- Characteristics may include:**
- knots
 - borer holes

RANGE STATEMENT

- stain
- checks
- tight resin pockets
- shakes
- wane
- want
- heart and heart shakes
- termite galleries
- decay
- lyctus susceptible sapwood and compression failures and fractures
- colour
- density
- texture
- grain
- figure
- qualities

Moisture content

is the amount of moisture maintained in timber after kiln drying or production to avoid cracking and deforming

Structural grade is to include:

- structural conformity of the timber
- consistency of the structural quality
- free of defects which may weaken strength, such as knots, shakes and short grain

Appearance is to include:

assessing the appropriateness of:

- defects
- contamination
- timber colours
- surface characteristics
- grain pattern

Disposing of may include:

- recycling timber with inappropriate defects or contamination
- re-using timber with inappropriate defects or contamination
- redirecting timber with inappropriate defects or contamination for energy recovery

Records and reports may include:

- stress-grading requirements
- product type and size
- inspection information
- grading and marking outcomes

RANGE STATEMENT

- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2216B Visually stress grade softwood

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to visually stress grade softwood by testing material for strength and durability against set classifications

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2216A Visually stress grade softwood

Application of the Unit

Application of the unit The unit involves visually stress-grading softwood in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------|---|
| 1. Prepare for stress-grading | <ul style="list-style-type: none"> 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to visually stress-grading softwood are identified and followed 1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i> 1.3. <i>Grading</i> requirements are identified in line with site procedures, <i>standards</i> and specifications 1.4. Materials, hardware items, tools and <i>equipment</i> requirements are identified from work order and obtained in line with workplace procedures 1.5. <i>Softwood</i> to be graded is positioned to provide appropriate access and facilitate efficient workflow 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures |
| 2. Evaluate softwood | <ul style="list-style-type: none"> 2.1. <i>Species</i> is identified and status of <i>seasoning</i> is checked in line with site procedures 2.2. Size and <i>tolerance</i> measurements are recorded accurately in line with site requirements 2.3. <i>Characteristics</i> are established and evaluated in line with standards and product specifications 2.4. <i>Moisture content</i> is checked, measured and evaluated against standards and <i>seasoning</i> requirements |
| 3. Grade softwood | <ul style="list-style-type: none"> 3.1. Softwood is visually stress graded based on grading standards and criteria in line with required <i>structural</i> |

ELEMENT**PERFORMANCE CRITERIA***grade*

- 3.2. Characteristics with the greatest limiting effect on the grade are diagnosed and checked
- 3.3. *Appearance* criteria are assessed and timber is marked, segregated and *disposed of* in line with site procedures and environmental requirements
- 3.4. Results of grading are *recorded and reported* in line with workplace procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to identify and apply correct methods and procedures when preparing, evaluating and grading softwood; use and maintain relevant tools, machinery and equipment; efficiently and safely visually stress grade softwood
- Communication skills sufficient to use effective communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures when visually stress-grading softwood; access, identify and apply information relevant to softwood grading
- Numeracy skills sufficient to estimate, measure and calculate sizes and time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems, malfunctions and defects; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for visually stress-grading softwood
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber)
- Organisational and site standards, requirements, policies and procedures for visually stress-grading softwood
- Environmental risks and hazards
- Criteria for recycling and re-using timber with inappropriate defects or contamination

REQUIRED SKILLS AND KNOWLEDGE

- Visual stress-grading techniques
- Grading markings and standards
- Methods of visual inspection
- Characteristics and properties of softwood
- Stress-grading equipment calibration and grade thresholds
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can visually grade softwood by following stress-grading rules and regulations

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to visually stress-grading softwood
- following organisational policies and procedures relevant to visually stress-grading softwood
- communicating and working safely with others in the work area
- preparing for stress-grading, including accurately

EVIDENCE GUIDE

- interpreting grading requirements
- stress-grading softwood in readiness for storage or processing
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling, including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- instructions for visually stress-grading material

Work order is to include:

and may include:

- type
- width
- length
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- supervisors

Appropriate personnel may

RANGE STATEMENT

include:

- suppliers
- clients
- colleagues
- managers

Grading

is the process of visually evaluating material characteristics for classification into various strength and structural grades

Standards may include:

- Australian Standards
- requirements established by the client
- requirements established by the producer

Equipment may include:

- vernier callipers
- profile gauges
- moisture meters (resistance and capacitance)
- tapes
- marking implements

Softwood:

- is non-pored wood that usually comes from trees with needle-like foliage and a more uniform cell structure

and may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- preservative treated timber

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Species may include:

- native species
- imported species

Seasoning

is the process of drying timber either with kilns or air-drying methods

RANGE STATEMENT

Tolerance

is the enterprise-accepted deviation from the perfect specifications

Characteristics may include:

- knots
- borer holes
- stain
- checks
- tight resin pockets
- shakes
- wane
- want
- heart and heart shakes
- termite galleries
- decay
- lyctus susceptible sapwood and compression failures and fractures
- colour
- density
- texture
- grain
- figure
- qualities
- uses

Moisture content

is the amount of moisture maintained in timber after kiln drying or production to avoid cracking and deforming

Structural grade is to include:

- structural conformity of the timber
- consistency of the structural quality
- free of defects which may weaken strength, such as knots, shakes and short grain

Appearance is to include:

- assessing the appropriateness of:
- defects
- contamination
- timber colours
- surface characteristics
- colour
- grain pattern

Disposing of may include:

- recycling timber with inappropriate defects or contamination
- re-using timber with inappropriate defects or

RANGE STATEMENT

contamination

- redirecting timber with inappropriate defects or contamination for energy recovery

Records and reports may include:

- stress-grading requirements
- product type and size
- inspection information
- grading and marking outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT2217B Visually stress grade cypress

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to visually stress grade cypress by testing material for strength and durability against set classifications

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2217A Visually stress grade cypress

Application of the Unit

Application of the unit The unit involves visually stress-grading cypress in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------|--|
| 1. Prepare for stress-grading | <ul style="list-style-type: none"> 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to visually stress-grading cypress are identified and followed 1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i> 1.3. <i>Grading</i> requirements are identified in line with site procedures, <i>standards</i> and specifications 1.4. Materials, hardware items, tools and <i>equipment</i> requirements are identified from work order and obtained in line with workplace procedures 1.5. <i>Cypress</i> to be graded is positioned to provide appropriate access and facilitate efficient workflow 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures |
| 2. Evaluate cypress | <ul style="list-style-type: none"> 2.1. Cypress is identified and status of <i>seasoning</i> is checked in line with site procedures 2.2. Size and <i>tolerance</i> measurements are recorded accurately in line with site requirements 2.3. <i>Characteristics</i> are established and evaluated in line with standards and product specifications 2.4. <i>Moisture content</i> is checked, measured and evaluated against standards and <i>seasoning</i> requirements |
| 3. Grade cypress | <ul style="list-style-type: none"> 3.1. Cypress is visually stress graded based on grading standards and criteria in line with required <i>structural</i> |

ELEMENT**PERFORMANCE CRITERIA***grade*

- 3.2.Characteristics with the greatest limiting effect on the grade are diagnosed and checked
- 3.3.*Appearance* criteria are assessed and timber is marked, segregated and *disposed of* in line with site procedures and environmental requirements
- 3.4.Results of grading are *recorded and reported* in line with workplace procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to identify and apply correct methods and procedures when preparing, evaluating and grading cypress; use and maintain relevant tools, machinery and equipment; efficiently and safely visually stress grade cypress
- Communication skills sufficient to use effective communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures when visually stress-grading cypress; access, identify and apply information relevant to visually stress-grading cypress
- Numeracy skills sufficient to estimate, measure and calculate sizes and time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems, malfunctions and defects; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for visually stress-grading cypress
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for visually stress-grading cypress
- Environmental risks and hazards
- Criteria for recycling and re-using timber with inappropriate defects or

REQUIRED SKILLS AND KNOWLEDGE

- contamination
- Visual stress-grading techniques
- Grading markings and standards
- Methods of visual inspection
- Characteristics and properties of cypress
- Stress-grading equipment calibration and grade thresholds
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can visually grade cypress by following stress-grading rules and regulations

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to visually stress-grading cypress
- following organisational policies and procedures relevant to visually stress-grading cypress
- communicating and working safely with others in the work area
- preparing for stress-grading, including accurately

EVIDENCE GUIDE

- interpreting grading requirements
- stress-grading cypress in readiness for storage or processing
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling, including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for visually stress-grading material

and may include:

- type
- width
- length
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may

- supervisors

RANGE STATEMENT

include:

- suppliers
- clients
- colleagues
- managers

Grading

is the process of visually evaluating material characteristics for classification into various strength and structural grades

Standards may include:

- Australian Standards
- requirements established by the client
- requirements established by the producer

Equipment may include:

- vernier callipers
- profile gauges
- moisture meters (resistance and capacitance)
- tapes
- marking implements

Cypress:

- white cypress is a softwood renowned for its durability in ground as well as its termite-resistant properties

and must be:

- native timber species
- dressed
- rough sawn

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Seasoning

is the process of drying timber either with kilns or air-drying methods

Tolerance

is the enterprise-accepted deviation from the perfect specifications

Characteristics may include:

- knots
- borer holes

RANGE STATEMENT

- stain
- checks
- tight resin pockets
- shakes
- wane
- want
- heart and heart shakes
- decay and compression failures and fractures
- colour
- density
- texture
- grain
- figure
- qualities
- uses

Moisture content

is the amount of moisture maintained in timber after kiln drying or production to avoid cracking and deforming

Structural grade is to include:

- structural conformity of the timber
- consistency of the structural quality
- free of defects which may weaken strength, such as knots, shakes and short grain

Appearance is to include:

assessing the appropriateness of:

- defects
- contamination
- timber colours
- surface characteristics
- colour
- grain pattern

Disposing of may include:

- recycling timber with inappropriate defects or contamination
- re-using timber with inappropriate defects or contamination
- redirecting timber with inappropriate defects or contamination for energy recovery

Records and reports may include:

- stress-grading requirements
- product type and size
- inspection information
- grading and marking outcomes

RANGE STATEMENT

- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2218B Cross cut materials with a fixed saw

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to position and saw materials with a circular saw or fixed chainsaw. The unit includes equipment maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2218A Cross cut materials with a fixed saw

Application of the Unit

Application of the unit

The unit involves cross cutting materials with a fixed saw in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------|--|
| 1. Prepare for operation | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to cross cutting materials with a fixed saw are identified and followed</p> <p>1.2. Pre-startup checks are completed on <i>equipment</i> in line with manufacturer recommendations and site procedures</p> <p>1.3. <i>Materials</i> are identified, positioned and secured in line with work order and site procedures</p> <p>1.4. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> <p>1.5. <i>Limitations</i> are identified and assistance is sought as required in line with site procedures</p> |
| 2. Cross cut materials | <p>2.1. Materials are visually assessed for defects in line with site standards</p> <p>2.2. Materials are cut within established standard tolerances for length and angle relative to centre line in line with OHS requirements</p> <p>2.3. Equipment is operated in line with OHS and site safety standards</p> <p>2.4. <i>Cutting techniques</i> maximise volume and quality of <i>recovery</i> in line with work orders and industry standard lengths</p> <p>2.5. Work area is regularly checked and <i>cleared</i> in line with OHS requirements, site procedures and environmental requirements</p> <p>2.6. <i>Sub-standard material</i> is <i>disposed of</i> in line with</p> |

ELEMENT**PERFORMANCE CRITERIA**

- site procedures and environmental requirements
- 2.7. **Problems** are identified and reported in line with site procedures
- 2.8. Materials are tagged, and required **records and reports** completed in line with site standards and procedures
3. Maintain sawing conditions
- 3.1. Equipment lock-out procedures are applied in line with OHS requirements and site procedures
- 3.2. Cutting rate is compared with that anticipated from knowledge of saw, size of log, species and condition
- 3.3. Saw blades are checked for blunt or damaged condition in line with site procedures
- 3.4. Blunt or damaged saw blades are identified and **dealt with** in line with site procedures, manufacturer recommendations and environmental requirements
- 3.5. Malfunctions, damage or irregular performance are identified, recorded and reported in line with site requirements
- 3.6. Equipment is cleaned, maintained and stored in line with manufacturer recommendations, site procedures and environmental requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; use appropriate methods to cross cut the full range of timber, timber sizes and species
- Communication skills sufficient to use effective communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for using a circular saw or fixed chainsaw
- Numeracy skills sufficient to maximise volume and quality recovery
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures;

REQUIRED SKILLS AND KNOWLEDGE

identify blunt or damaged saw

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for cross cutting materials with a fixed saw
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for cross cutting materials with a fixed saw
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Criteria for recycling and re-using sub-standard material
- Industry standard length dimensions
- Effects of defects on recovery
- Procedures for lock-out
- Common industry terminology
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently use a fixed saw while demonstrating the correct procedures for cross cutting materials and

EVIDENCE GUIDE

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>equipment maintenance</p> <p>The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to cross cutting materials with a fixed saw • following organisational policies and procedures relevant to cross cutting materials with a fixed saw • correctly positioning and securing materials onto carriage or conveyor for cross cutting • conducting safe and efficient cross cutting of materials using a fixed saw, and maximising volume and quality of recovery • conducting routine maintenance and adjustment procedures of the saw, identifying faults, malfunctions or irregular operation • maintaining effective communication with others in the workplace
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling, including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements

RANGE STATEMENT

- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Equipment** may include:
- fixed circular saws
 - fixed chainsaws
- Materials** may include:
- packs of timber
 - individual pieces of timber
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Limitations** may relate to:
- job role and responsibilities
 - own competency level
 - industry requirements
 - own understanding of risk identification processes
 - own interpretation of maps
 - legislation
 - regulations and procedures
 - OHS requirements
 - legal responsibilities
- Cutting techniques** may relate to:
- cutting positions
 - work order requirements
 - industry standard lengths
 - straightness requirements
 - cutting patterns
 - maximising volume and quality of recovery requirements
 - cutting procedures that minimise capping and splitting of material
 - placing material on conveyor or carriage
 - securing material
 - cutting at optimum feed rate to avoid damage to saw blade
 - using energy effectively and efficiently

RANGE STATEMENT

- Recovery:**
- using material effectively and efficiently
 - is the volume of timber sawn from a resource compared to the volume of that resource
 - is expressed as a percentage - $\text{sawn timber volume} / \text{initial log volume} \times 100$
 - maximises the value of the resource
- Cleared** may relate to:
- using hand tools and a water jet to clear debris from the surface of material
 - clearing the work area of off-cuts
 - debris
 - ensuring saw clearance around material
 - depositing off-cuts and debris in recognised areas
 - clearing surfaces of debris likely to cause saw damage in the cutting area
- Sub-standard material** may include:
- material with defects
 - material cut outside established standard tolerances for length and angle relative to centre
- Disposing of** may include:
- recycling sub-standard material
 - re-using sub-standard material
 - redirecting sub-standard material for energy recovery
- Problems** may relate to:
- performance of saw
 - defects in material
 - communication
 - hazards and risks at the work site
 - capping and splitting of material
- Records and reports** may include:
- tally sheets
 - quality sheets and forms
 - production sheets and downtime sheets
 - production details
 - maintenance details
 - breakdown or equipment faults
 - computer problems
 - interruptions to production
- and may be:
- manual
 - computer-based system
 - other appropriate organisational

RANGE STATEMENT**Dealing with** may include:

- communication system
- repairing or sending for repair blunt or damaged saw blades
- recycling blunt or damaged saw blades that cannot be repaired
- sending blunt or damaged saw blades that cannot be repaired to landfill

Unit Sector(s)

Not Applicable

Competency field**Competency field** Common Technical

FPICOT2219B Use hand-held tools

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to use hand-held tools, including the selection and use of a variety of manual hand tools and power tools to be used for various tasks

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2219A Use hand-held tools

Application of the Unit

Application of the unit

The unit involves using hand-held tools in a range of work settings

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for using hand-held tools	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to using hand-held tools are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Types of <i>hand-held tools</i> are identified for the tasks to be undertaken</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Hand-held tool operating process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Select and operate hand-held tools	<p>2.1. Production requirements are assessed and hand-held tools selected to complete the task</p> <p>2.2. Tools are checked before use and unsafe or faulty items are documented and marked for repair in line with organisational standard operating procedures</p> <p>2.3. Hand and power tools are used in line with manufacturer recommendations to produce the required outcomes</p> <p>2.4. Tool operation is regularly checked to assess the need for <i>sharpening</i> or other maintenance requirements</p> <p>2.5. <i>Operational maintenance</i> of hand and power tools is</p>

ELEMENT**PERFORMANCE CRITERIA**

completed in line with organisational requirements, manufacturer specifications, and environmental and legislative regulations

2.6. Hand-held tools and equipment faults are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain hand-held tools and equipment
- Communication skills sufficient to use appropriate interpersonal techniques with colleagues and others
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for using hand-held tools; review, identify and report work requirements
- Numeracy skills sufficient to estimate the time required to complete tasks
- Problem solving skills sufficient to identify problems and faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for using hand-held tools
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for using hand-held tools
- Environmental risks and hazards
- Characteristics of hand and power tools
- Sharpening equipment, methods and geometry
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including

REQUIRED SKILLS AND KNOWLEDGE

- calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently use hand-held tools in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to using hand-held tools
- following organisational policies and procedures relevant to using hand-held tools
- using hand-held tools in line with the work order and prescribed organisational requirements
- sharpening and maintaining hand-held tools in line with workplace and manufacturer specifications

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE

Method of assessment

- materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
 - Where the participant has a disability, reasonable adjustment may be applied during assessment
 - Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised***

RANGE STATEMENT

wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role

RANGE STATEMENT

and responsibility

- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the use of hand-held tools for the completion of designated projects

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Hand-held tools may include:

- manual hand tools consisting of:
 - handsaws
 - knives
 - chisels
 - hammers
 - hand drills
 - files
 - rasps
- portable power tools consisting of:
 - drills
 - grinders
 - sanders
 - saws
 - nail guns

RANGE STATEMENT

Equipment is to include:

- procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- manual and portable power hand-held tools and equipment

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Sharpening is to include:

- pitch
- angle
- depth of cut
- speed the knife or blade is sharpened at to obtain a sharp edge

Operational maintenance may include:

- sharpening
- cleaning
- lubricating
- tightening
- adjusting

Records and reports may include:

- knife or blade type
- size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system
- other appropriate organisational

RANGE STATEMENT

communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2220B Select trees for tending operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to select appropriate trees for tending operations. The unit includes identification of tree characteristics and distribution, and use of marking equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2220A Select trees for tending operations

Application of the Unit

Application of the unit

The unit involves selecting trees for tending operations in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify trees	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>selecting trees</i> for tending operations are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are identified and adhered to in line with relevant legislation and regulations</p> <p>1.3. Selection <i>method</i>, characteristics and tree distribution are determined from <i>work order</i> and checked with <i>appropriate personnel</i></p> <p>1.4. <i>Hazards</i> and site conditions are inspected and assessed in line with regulations and site procedures</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Select and mark trees	<p>2.1. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>2.2. Forest area for tree selection is located and checked in line with work order and environmental regulations</p> <p>2.3. Trees are selected in line with work order, site procedures and environmental regulations</p>

ELEMENT**PERFORMANCE CRITERIA**

- 2.4. Trees are marked or re-marked using appropriate marking equipment in line with site procedures
- 2.5. Recommendations for further tree selection are made to appropriate personnel in line with site procedures and environmental regulations

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and marking equipment; select trees; recognise common diseases, pests and nutritional deficiencies
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for selecting trees; review and identify work requirements; locate forest area in the field from maps and plans
- Numeracy skills sufficient to measure, estimate, and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for selecting trees for tending operations
- Environmental protection requirements, including the safe disposal of waste material and the safe use and storage of chemicals
- Organisational and site standards, requirements, policies and procedures for selecting trees for tending operations
- Environmental risks and hazards
- Using material effectively and efficiently
- Tree species and tree selection components of the work order
- Hazards associated with tree selection
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding

REQUIRED SKILLS AND KNOWLEDGE

techniques

- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently identify, select and mark appropriate trees by following specific guidelines, criteria and procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to selecting trees for tending operations
 - following organisational policies and procedures relevant to selecting trees for tending operations
 - identifying forest location, tree distribution and characteristics maps, work order and other instructions
 - selecting and marking trees using marking equipment
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in

Context of and specific resources for assessment

EVIDENCE GUIDE

an off-site context

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Tree selection may include:

- dominance and vigour
- leader defects
- straightness
- lean
- size
- angle
- number of branches
- spacing and overall tree health
- stocking
- green crowns
- quality requirements

and may be selected for:

- thinning
- pruning
- disease treatment
- harvesting
- retaining
- seed collection
- removal because of tree damage
- species
- retention as habitat trees
- recruitment habitat trees

Environmental protection measures may relate to:

- hygiene of the area
- relevant national, state or territory, and local

RANGE STATEMENT

legislation and regulations

and may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions

Method may include:

- counting trees at regular intervals (e.g. every fifth tree)
- selecting trees with particular characteristics (e.g. storm damage or disease)
- selecting predetermined number of trees in a given area
- selecting trees for specialised products
- assessing and selecting trees in relation to their role in carbon capture and storage

Work order may relate to:

- tree species
- required safety clothing and equipment
- required pruning equipment
- tree selection
- production target
- quality
- stock
- required stub length
- pruning height

and may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- line management

RANGE STATEMENT

Hazards may include:

- slope
- water
- rock
- undergrowth
- slash
- depressions and holes
- falling or fallen branches

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Equipment may include:

- marking equipment
- tape
- paint
- blaze

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2222B Produce laminated beams

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and cut boards for beam production. It includes the work involved in laying up and clamping beams, and joining timber components

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2222A Produce laminated beams

Application of the Unit

Application of the unit

The unit involves producing laminated beams in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to producing <i>laminated beams</i> are followed</p> <p>1.2. <i>Work order</i> and construction plans are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>timber</i> and <i>glue</i> to be used in assembly are collected</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. <i>Assembly jigs</i> required for production are specified and prepared</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Cut boards for beams	<p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Condition of boards is <i>visually assessed</i> and <i>moisture content</i> checked</p> <p>2.3. Boards are <i>straight or scarf cut</i>, optimising quantity and eliminating faults where possible</p> <p>2.4. Cut boards are segregated in line with length and</p>

ELEMENT**PERFORMANCE CRITERIA**

- marked in line with site requirements
- 2.5. **Defective components** are rejected and **disposed of** in line with site procedures and environmental requirements
- 2.6. Assembly jigs are stored for further use or disposed of in line with site procedures and environmental requirements
3. Assemble beams
- 3.1. **Timber components** are selected from pre-cut material in line with cutting list and beam design
- 3.2. Glue is mixed to site requirements using manufacturer recommended glue-handling techniques
- 3.3. **Glue spreader** is set to apply even coating to components and glue line is applied with minimal wastage in line with standard operating procedures
- 3.4. Components are laid in jigs ready for joining with allowable faults, joins and grain in line with construction standards and grading rules
- 3.5. **Press** is started, and controls and operation are checked in line with standard operating procedures
- 3.6. Press is set with jigs and beam is positioned to the correct orientation
- 3.7. Load and heat are applied to the beam in line with site requirements
- 3.8. Beam is checked and removed from the press
4. Prepare beams for despatch and report
- 4.1. Finished beams are checked and labelled in line with work order
- 4.2. Components are removed from jigs and safely **stacked** in a designated location in line with work order
- 4.3. Finished beams are **strapped**, packed and labelled ready for transportation
- 4.4. Strapping waste is minimised and **dealt with** in line with site procedures, manufacturer recommendations and environmental requirements
- 4.5. **Equipment faults** are recognised and reported in line with site procedures
- 4.6. **Records and reports** are accurately completed, processed and maintained in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely assemble laminated beams
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for producing laminated beams; review and identify work requirements
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing laminated beams
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing laminated beams
- Environmental risks and hazards
- Using energy effectively and efficiently
- Criteria for recycling and re-using material with defective components/assembly jigs no longer required
- Types of laminated beams and their use and defects
- Procedures for assembly sequences and jigs
- Assembly componentry and construction standards
- Industry standard cross sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including

REQUIRED SKILLS AND KNOWLEDGE

- calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce laminated beams in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy all the requirements of, the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to producing laminated beams
- following organisational policies and procedures relevant to producing laminated beams
- assembling laminated beams in line with work order and construction plans to meet construction standards
- stacking and strapping bundles of completed beams in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements

EVIDENCE GUIDE

Method of assessment

- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

- legal

RANGE STATEMENT

may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Laminated beams:

- are wide thick beams which may be straight or curved
- are made up of many layers of timber board to provide the beam with bulk and subsequent strength to withstand building loads

Work order is to include:

- instructions for the assembly and despatch of timber laminated beams from the work site

and may include:

- construction plans or drawings
- type of product
- size
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Timber may include:

- native timber species
- imported timber species
- dressed timber
- stress and non-stress graded timber

RANGE STATEMENT

- Glue** is to include:
- preservative treated timber
 - water resistant adhesives, such as epoxy resins
- Equipment** may include:
- measuring equipment
 - assembly jigs
 - docking and trimming saws
 - presses
 - marking equipment
 - strapping equipment
- Assembly jigs** may include:
- enterprise-manufactured templates that assist in the positioning of components during the assembly process
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Pre-startup checks** are conducted to ensure:
- equipment has been set up correctly
 - systems are performing accurately
 - machinery is operating to optimum performance
- Visual assessment** is the inspection of timber to determine finish quality and faults
- Moisture content:**
- is the amount of moisture maintained in timber after kiln drying to avoid cracking and deforming
 - in Australia, generally ranges between 10% in warmer, more humid climates to 14% in cooler climates
- Straight or scarf cutting:**
- straight cutting is docking timber to length with a vertical cut
 - scarf cutting is docking timber at a bevel, providing a larger end grain surface for bonding

RANGE STATEMENT

Defective components may include:

- components with an unacceptable level of:
 - warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets

Disposing of may include:

- recycling material with defective components/assembly jigs no longer required
- re-using material with defective components/assembly jigs no longer required
- redirecting material with defective components/assembly jigs no longer required for energy recovery

Timber components:

are the sections of timber that have been pre-cut in readiness for assembly and have been cut to follow the construction plans and cutting list

Glue spreader is to include:

- equipment that spreads glue evenly to boards being laminated

Press is to include:

- flat presses
- presses with curved templates

Stacking may include:

- preparing for transport
- categorising in common size and shape
- marking lots in line with work order and site requirements

Strapping may include:

- locating so as not to block access or passage
- securing bundles with metal or plastic strap
- tightening and tensioning using hand-held equipment to prevent slippage, without risk of strap breakage or damage to products

Dealing with may include:

- recycling strapping waste
- sending strapping waste to landfill

Equipment faults may include:

- damaged equipment components
- electrical faults

Records and reports may include:

- product type
- size
- inspection information
- grading and labelling outcomes

RANGE STATEMENT

- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system
- other appropriate organisational system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT2223B Segregate and sort logs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to locate and segregate logs from the stockpile and sort the logs into specified end usage in separate storage areas

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2223A Segregate and sort logs

Application of the Unit

Application of the unit The unit involves segregating and sorting logs in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to segregate and sort logs	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to segregating and sorting logs are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.4. Standards, specifications and lengths of <i>timber products</i> are identified and assessed in line with their planned usage</p> <p>1.5. Log and wood <i>characteristics</i> are specified and logs to be segregated and sorted are identified and checked</p> <p>1.6. Log segregation and sorting operations are identified for <i>safe working conditions</i> and planned in line with site procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Segregate and sort logs	<p>2.1. Logs are <i>segregated</i> in line with work order, and environmental and OHS requirements</p> <p>2.2. Log species and sizes are identified in line with work order and end use requirements</p> <p>2.3. Mechanical equipment is directed to the specified logs and extraction from the stockpile is executed</p> <p>2.4. Segregated logs are <i>sorted</i> into end use batches or individual stockpiles</p> <p>2.5. Logs are <i>measured</i> and data is recorded clearly and</p>

ELEMENT**PERFORMANCE CRITERIA**

- accurately in line with industry standards
- 2.6. Segregation and sorting results are *recorded and reported* in line with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment; efficiently and safely segregate and sort logs; segregate and sort logs on the basis of species, size and characteristics across the full range required; identify and calculate log defects; optimise recovery of logs
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for segregating and sorting logs
- Numeracy skills sufficient to select appropriate mathematical processes and accurately measure logs
- Problem solving skills sufficient to review and identify work requirements; analyse problems; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for segregating and sorting logs
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for segregating and sorting logs
- Environmental risks and hazards
- Industry standards for log species, size and characteristics requirements across the full range
- Procedures for segregating and sorting logs
- Segregation codes
- Industry standards for defects and length dimensions

REQUIRED SKILLS AND KNOWLEDGE

- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently evaluate, segregate and sort logs in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy all the requirements of, the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to segregating and sorting logs
- following organisational policies and procedures relevant to segregating and sorting logs
- safely and efficiently segregating and sorting logs into designated categories from stockpiles
- estimating and measuring logs

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than

EVIDENCE GUIDE

confirmatory questions, will usually be conducted in an off-site context

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards
- obstacles

Work order is to include:

- details of material to be evaluated, graded and marked

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- managers

Timber products may include:

- poles
- piles
- veneer

RANGE STATEMENT

Characteristics may include:

- graded sawlogs
- non-graded sawlogs
- pulp
- species
- pipe
- open pipe
- discontinuous and irregular shaped pipes
- loose gum veins
- gum pockets and rings
- termites and grubs
- hearts out of centre
- brown stain
- rot
- punk
- cork or pith
- black borer
- black heart
- straight shakes
- shakes in spiral grain
- overgrowth and doze pockets
- small log pipe allowance
- length
- non-allowable length defects
- control of potential and existing risks and hazards
- ensuring log stability during:
 - evaluation
 - grading
 - marking

Safe working conditions will include:

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Segregating

is the process of locating and removing designated

RANGE STATEMENT

logs from a stockpile or landing to a specified location

Sorting

is the process of allocating segregated logs into batches, based on:

- species
- sizes
- characteristics
- using callipers
- using other standard measuring tools
- segregating and sorting operations
- difficulties or issues faced
- environmental issues
- recommendations for future work
- results
- costs
- hazards
- incidents
- equipment malfunctions

Measurement may include:

Records and reports may include:

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT2224B Band edges of panels

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to set up, operate and maintain edge banding machines that use automated processes to apply and finish edge treatments

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2224A Band edges of panels

Application of the Unit

Application of the unit

The unit involves banding edges of panels in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for edge banding	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to banding edges of panels are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>panels</i> to be <i>edge banded</i> are acquired from the production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Edge banding process is selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set up edge banding equipment	<p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Machine <i>settings</i> and adjustments are made in line with job requirements and machine manufacturer's instructions</p> <p>2.3. <i>Test runs</i> are conducted to check machine operation, accuracy and quality of finished work</p> <p>2.4. Adjustments are made to machine settings to suit material being edged and as a result of the test runs</p> <p>2.5. Test run material is <i>processed</i> in line with site procedures and environmental requirements</p>
3. Apply edging	<p>3.1. Panels are <i>fed</i> into the machine in line with</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>manufacturer's instructions and safe handling procedures</p> <p>3.2. Machine is operated and monitored to ensure product quality and output in line with manufacturer recommendations</p> <p>3.3. <i>Waste quantities</i> are checked and minimised in line with site procedures</p> <p>3.4. Items not meeting quality requirements are repaired or <i>disposed of</i> in line with workplace procedures and environmental requirements</p> <p>3.5. Edge banding process and equipment faults are <i>recorded and reported</i> to appropriate personnel</p>
4. Conduct operator maintenance	<p>4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>4.2. Edging mechanisms are checked for build-up of glue and blunt condition in line with site procedures</p> <p>4.3. <i>Edge treatments</i> are checked or reloaded in line with manufacturer recommendations</p> <p>4.4. Machine area is kept clear of dust and debris in line with OHS and environmental requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely band edges of panels
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures relating to edge banding panels
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for banding edges of panels
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for banding edges of panels
- Environmental risks and hazards
- Criteria for recycling and re-using items that cannot be repaired
- Panel products and edging purposes
- Edge banding techniques
- Distribution processes
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently edge band panels in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to banding edges of panels
- following organisational policies and procedures relevant to banding edges of panels
- edge banding panels in readiness for storage and/or processing
- conducting operator maintenance on edge banding equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred

EVIDENCE GUIDE

to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

RANGE STATEMENT

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the receipt, despatch and edge banding of panels to or from the designated storage location or processing

and may include:

- type
- size
- thickness

RANGE STATEMENT

- quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Panel** may include:
- laminated veneer
 - chipboard
 - fibreboard, including medium density fibreboard
 - other manufactured board products
- Edge banding** is the process of:
- securing a timber, veneer or laminate strip to panels using edge banding equipment and glue-backed edge treatments or gluing applications
 - pressing the edge treatment to secure it and removing any lumps or bubbles
 - trimming the edge treatment
- Equipment** is to include:
- automated or mechanical edge banding machines
 - procedures for machine lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Pre-startup checks** are conducted to ensure:

RANGE STATEMENT

- Settings** are to include:
- machine has been set up correctly
 - systems are performing accurately
 - machine is operating to optimum performance
 - panel size
 - squareness
 - profile
 - edge treatment width
 - alignment of the edge treatment
 - speed of the application
 - trim allowances
 - glue application rates (if not glue-backed)
- Test runs** are trials of the settings on short pieces to minimise waste and ensure correct edging application
- Processing** may include:
- including test material that meets quality requirements as part of the process
 - recycling test material that does not meet quality requirements
 - re-using test material that does not meet quality requirements
- Fed** is the speed at which panels are entered into the edging process, whether manually or automatically fed
- Waste quantities** are to include:
- processes for minimising waste
 - checking the trim distances for cut off on each panel
- Disposing of** may include:
- recycling items that cannot be repaired
 - re-using items that cannot be repaired
 - redirecting items that cannot be repaired for energy recovery
 - sending items that cannot be repaired to landfill
- Records and reports** may include:
- edging type
 - product type
 - size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards

RANGE STATEMENT

- incidents
- equipment malfunctions

and may be:

Edge treatments may include:

- manual
- computer-based system
- other appropriate organisational communication system
- glue-backed veneer edge strip role
- timber edging strips
- laminate edge stripping (glue-backed or glued, on a role or in strips)

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2225B Chip or flake wood

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate specialist equipment to produce chips or flake from wood in readiness for production, while monitoring and maintaining the flow of operation. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2225A Chip or flake wood

Application of the Unit

Application of the unit

The unit involves chipping or flaking wood in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for chip or flake production	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>chipping or flaking</i> wood are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of wood to be chipped or flaked is <i>assessed</i> and acquired from the <i>stockpile</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Chipping or flaking process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Produce chips and flakes	<p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Machines and <i>feed systems</i> are started and adjusted to produce chip or flake size in line with organisational requirements</p> <p>2.3. Chip or flake production is regularly checked to ensure it meets wood chip or flake quality</p>

ELEMENT**PERFORMANCE CRITERIA**

- specifications and organisational requirements
- 2.4. *Conveyor operations* are monitored and jams cleared to ensure free flow of waste output material, which is kept to a minimum
- 2.5. Output of chips or flakes is directed to storage bins in line with prescribed fill levels
- 2.6. Faults requiring *emergency shutdown* are detected and action is taken to rectify the problem
- 2.7. Processing and equipment faults are *recorded and reported* to the appropriate personnel
3. Conduct operator maintenance
- 3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 3.2. Blades or knives are checked for faulty, blunt or damaged condition
- 3.3. Blades or knives are removed and replaced in line with manufacturer recommendations
- 3.4. Machine and surrounding area are kept clear of dust and debris in line with OHS and environmental requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely produce chips or flakes
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for producing chips or flakes
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for chipping or flaking wood
- Environmental protection requirements, including the safe disposal of waste material, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for chipping or flaking wood
- Environmental risks and hazards
- Using energy effectively and efficiently
- Characteristics of wood chips and stock levels
- Chip and flake production process
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce chips or flakes in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to chipping or flaking

EVIDENCE GUIDE

wood

- following organisational policies and procedures relevant to chipping or flaking wood
 - producing chips or flakes in line with the work order and prescribed organisational requirements
 - conducting operator maintenance on chipping and flaking equipment
 - storing produced chips or flakes in line with organisational requirements and OHS regulations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT**may include:**

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements**may include:**

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Chips or flakes

are the output product as a result of converting wood into chip or flake material, which is then used to produce other products

Work order is to include:

- instructions for the assessment of chips and the chip or flake grade

and may include:

- feed rate
- quantity

RANGE STATEMENT

- Appropriate personnel** may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Assessing wood** is to include:
- species
 - size
 - moisture content
 - contamination issues associated with selected wood, such as:
 - logs
 - billets
 - off-cuts
 - waste timber
 - down grade timber
 - residue
 - chips
 - reject boards
- Stockpile** is the pile of available wood products ready for conversion to chips or flakes, classified in size and species
- Equipment** is to include:
- procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source
- and may include:
- chippers
 - hogs
 - shredders and knife mills
 - mechanised feed systems
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding

RANGE STATEMENT

- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Pre-startup checks

are conducted to ensure:

- machine has been set up correctly
- systems are performing accurately
- machine is operating to optimum performance

Feed systems may include:

- conveyors
- chutes or track systems moving wood to the chipper
- moving processed wood chips or flakes from the chipping machines

Conveyor operations may include:

- moving wood products to the chipping/flaking machinery
- extracting chips or flakes and moving to collection bins

Emergency shutdown

is the immediate shutting off of equipment to prevent an accident or damage to the machine or product

Records and reports may include:

- product type
- size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2226B De bark logs mechanically

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to mechanically debark logs to a set diameter and length. The unit includes assessing logs for diameter, species, faults and moisture content

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2226A De bark logs mechanically

Application of the Unit

Application of the unit The unit involves debarking logs mechanically in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for debarking	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to debarking logs mechanically are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>logs</i> to be <i>debarked</i> are selected from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Debarking process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Debark logs	<p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Material is fed into the machine at the <i>feed rate</i> prescribed by organisational requirements</p> <p>2.3. Debarking process is maintained and adjusted to produce required quantity of logs and to maximise feed rate</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Debarking process and <i>conveyors</i> are regularly checked and adjusted to maintain desired quality and output
	2.5. Logs with <i>defects</i> are segregated, rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	2.6. Debarking process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
	2.7. Debarked logs are safely directed to storage in a designated location in line with work order
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. Cutters are checked for blunt or damaged condition in line with site procedures
	3.3. Cutters are removed and replaced in line with manufacturer recommendations
	3.4. Blunt or damaged cutters are <i>dealt with</i> in line with site procedures and environmental requirements
	3.5. Machine area is kept clear of dust and debris in line with OHS and environmental requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely debark logs mechanically
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for debarking logs mechanically
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for debarking logs mechanically
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for debarking logs mechanically
- Environmental risks and hazards
- Criteria for recycling and re-using timber with defects
- Using energy effectively and efficiently
- Debarking systems
- Characteristics of timber and timber defects
- Debarking processes, feed rates and finish
- Assessment criteria for cutter condition
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently mechanically debark logs in line with organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to debarking logs mechanically
- following organisational policies and procedures relevant to debarking logs mechanically
- debarking logs mechanically in line with the work order and prescribed organisational specifications
- conducting operator maintenance on debarking equipment
- storing logs in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related

EVIDENCE GUIDE

conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and

RANGE STATEMENT

substances

- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for debarking logs and despatching logs from the work site to downstream processing

RANGE STATEMENT

and may include:

- species
- diameter
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Logs are to include:

- assessment of diameter range
- curvature
- faults
- species
- moisture content

Debarking is the process of:

- forcing a log through a debarking machine which strips the log bare of its bark, making the log available for further downstream processing
- outfeeding the bark for landscaping supplies

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight

RANGE STATEMENT

- Equipment** is to include:
- grade
 - shelf life
 - stock rotation position
 - measuring equipment
 - debarking plant
 - procedures for machine lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- computer-automated systems
 - automated storage-conveyor systems
 - automated diameter and length sorting systems
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice

Pre-startup checks

are conducted to ensure:

- debarking plant has been set up correctly
- cutters are installed accurately
- machinery is operating to optimum performance

Feed rate

is the rate of speed the material is passed through the machine affecting the sharpness of the cutters, the finish of the material, and the production output

Conveyor is to include:

- belts
- chutes or travelator methods of transporting logs to and from the debarker, which may be automated in conjunction with the log storage area

Defects may include:

- incorrect moisture content
- warp

RANGE STATEMENT

- wane
- curvature
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling timber with defects
- re-using timber with defects
- redirecting timber with defects for energy recovery

Records and reports may include:

- debarking system
- product type
- size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Dealing with may include:

- repairing or sending to be repaired blunt or damaged cutters
- recycling blunt or damaged cutters that cannot be repaired
- sending blunt or damaged cutters that cannot be repaired to landfill

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2227B Process orders and despatch products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to process orders and despatch goods. This competency is typically performed by operators working either independently or as part of a work team

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2227A Process orders and despatch products

Application of the Unit

Application of the unit The unit involves processing orders and despatching products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for orders and despatch	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to processing orders and despatching products are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. <i>Orders</i> and consignment <i>documentation</i> are reviewed and checked with appropriate personnel</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. <i>Despatch</i> schedules are planned and sequenced in line with workplace procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Process orders	<p>2.1. <i>Products</i> are selected and orders compiled and completed</p> <p>2.2. Products for despatch are checked against product knowledge, labels and other <i>identification systems</i></p> <p>2.3. Products are sorted and consolidated in line with workplace procedures</p> <p>2.4. Finished products are wrapped as required and</p>

ELEMENT	PERFORMANCE CRITERIA
3. Despatch products	<p>ensuring minimal wastage, in line with order, workplace procedures and environmental requirements</p> <p>2.5. Order is checked against despatch schedule and order documentation</p> <p>3.1. Workplace records for despatch and product movement are completed</p> <p>3.2. Load labels and documentation are attached and checked, and loading is organised</p> <p>3.3. Final check of load labels and documentation is conducted</p> <p>3.4. Transportation requirements are explained to the driver</p> <p>3.5. Stock records are updated in line with workplace procedures</p> <p>3.6. Documentation and equipment faults are recorded and reported to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely process orders and despatch products
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for processing orders and despatching products
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for processing orders and despatching products

- Environmental protection requirements, including the safe disposal of waste material and minimisation of carbon emissions
- Organisational and site standards, requirements, policies and procedures for processing orders and despatching products
- Environmental risks and hazards
- Using energy effectively and efficiently
- Procedures for processing orders and documentation, including despatch procedures
- Products, their construction and packaging
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently process orders and despatch products in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to processing orders and despatching products

EVIDENCE GUIDE

- following organisational policies and procedures relevant to processing orders and despatching products
 - processing orders and despatching products from the organisational warehouse in line with customer orders
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for filling customer orders
- despatch allocation

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients

RANGE STATEMENT

- colleagues
 - managers
- Orders** are to include:
- customer orders
 - organisational requirements
- Documentation** may include:
- order dockets
 - despatch orders
 - stock records
 - tally sheets
 - delivery records
 - quality and accounting records
 - QA forms
 - load manifests
 - payment instructions
- Equipment** may include:
- computers
 - calculators
 - measuring equipment
- Despatch** is the sending out of products relating to an order
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Products** may include:
- timber
 - wood panel products
 - manufactured timber products
- Identification systems** may include:
- tags
 - labelling
 - bar codes
 - organisational coding
 - stickers
- Load labels** are to include:
- information about loading requirements, including:
 - customer details
 - carrier

RANGE STATEMENT

Transportation may include:

- time of despatch
- courier companies
- trucking companies
- rail
- shipping
- documentation listed above together with:
 - inspection and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions

Records and reports may include:

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2228B Store materials

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to plan and operate a timber racking system and storage bay, including the receipt and despatch of packs of timber and timber products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2228A Store materials

Application of the Unit

Application of the unit The unit involves storing materials in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------|---|
| 1. Prepare for storage | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to storing <i>materials</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of material to be stored is <i>inspected and checked for grading and labelling</i> in line with site procedures</p> <p>1.4. Required <i>storage locations</i> are selected and isolated in line with site procedures</p> <p>1.5. <i>Lifting equipment and assistance</i> with lifting are selected and requested</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Receive materials | <p>2.1. Packs containing material to be stored are placed on stand, frame or ground in line with site operating procedures</p> <p>2.2. <i>Packs are released/unbound</i> in a clear area to avoid injury to personnel or damage to material</p> <p>2.3. Material is checked to meet labelled or expected content</p> <p>2.4. Packs not meeting the order or containing contaminated material are reported to appropriate personnel</p> <p>2.5. Area is regularly cleared of packing and loose material in line with site operating procedures and</p> |

ELEMENT**PERFORMANCE CRITERIA**

- environmental requirements
3. Store materials
- 3.1. Material is separated by *size* and placed in planned storage locations
- 3.2. Material not meeting *quality requirements* is *disposed of* in line with site procedures
- 3.3. Storage locations are labelled in line with site systems
- 3.4. *Records and reports* are accurately completed, processed and maintained in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely receive and store timber and timber products
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for storing timber and timber products
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for storing materials
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber)
- Organisational and site standards, requirements, policies and procedures for storing materials
- Environmental risks and hazards

REQUIRED SKILLS AND KNOWLEDGE

- Criteria for recycling and re-using material
- Methods of visual estimation, grading, colour identification and tagging
- Industry standard cross sections and lengths
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently receive timber or timber products, and sort and store them in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to storing materials
- following organisational policies and procedures relevant to storing materials
- preparing for, receiving and inspecting a pack of timber or timber products for storage
- sorting a pack of timber, and moving and allocating its contents to storage locations in line with organisational requirements

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

- Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Materials** may include:
- native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - stress and non-stress graded timber
 - preservative treated timber
 - medium density fibreboard
 - laminated veneer
 - chipboard, fibreboard and other manufactured board products
 - coated and/or treated timber products
 - hardware products
 - building materials
 - landscape products
- Work order** is to include:
- instructions for the receipt, despatch and storing of timber and timber products to or from the designated storage location

RANGE STATEMENT

and may include:

- type
- size
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Inspection and checking for grading and labelling may include:

- visual estimation
- confirmation of stress-grading
- identification and categorisation of standard cross sections and length
- profile
- colour identification
- general information labelling
- tagging

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life

RANGE STATEMENT

- Lifting equipment and assistance** may include:
- stock rotation position
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting, such as:
- involving two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Pack release and unbinding** may include:
- removing wrapping material
 - controlling the release cutting of binding straps clear of other personnel
 - controlling the shifting of materials after release
 - carefully disposing of all packing materials
- Size** may include:
- cross sectional size
 - width
 - thickness
 - length
 - diameter
 - profile
- Quality requirements** may include:
- inspection and acceptance of material that does not exceed organisational specifications for:
 - warp
 - wane
 - cupping
 - shakes
 - insect defects

RANGE STATEMENT

- knots
 - resin pockets
- Disposing of** may include:
- recycling material that does not meet quality requirements
 - re-using material that does not meet quality requirements
 - redirecting material that does not meet quality requirements for energy recovery
- Records and reports** may include:
- product type
 - size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2229B Dock material to length

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and dock material to length with a power driven saw. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2229A Dock material to length

Application of the Unit

Application of the unit

The unit involves docking material to length in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cutting	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to docking <i>material</i> to length are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.4. Cutting list is reviewed in line with work order and site procedures</p> <p>1.5. Material <i>cutting patterns and saw setup sequences</i> are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Cut material to length	<p>2.1. Material is marked and stops are set in preparation for cutting</p> <p>2.2. Cutting sequence and patterns are followed to produce required quantity</p> <p>2.3. Cuts are <i>checked</i> for length within a set <i>tolerance</i></p> <p>2.4. Material with <i>features</i>, incorrect cuts and off-cuts are <i>disposed of</i> in line with site procedures</p> <p>2.5. Processing and equipment faults are reported to appropriate personnel</p> <p>2.6. Material is safely <i>stacked</i> in a designated location in line with work order requirements</p>
3. Conduct operator	<p>3.1. Equipment lock-out procedures are followed in line</p>

ELEMENT	PERFORMANCE CRITERIA
maintenance	<p>with OHS legislation and site procedures</p> <p>3.2.Saw blades are checked for blunt or damaged condition in line with site procedures</p> <p>3.3.Blunt or damaged saws are identified and <i>dealt with</i> in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>3.4.Saw area is kept clear of dust, off-cuts and debris in line with OHS and environmental requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely cut material to length and angle
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for cutting timber to length and angle
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures; identify blunt or damaged saw

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for docking material to length
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for docking material to length
- Environmental risks and hazards
- Criteria for recycling and re-using material with features, incorrect cuts and

REQUIRED SKILLS AND KNOWLEDGE

off-cuts

- Characteristics of timber and timber features
- Cutting patterns and sequences
- Optimal docking practices
- Methods for assessing condition of saw blades
- Industry standard cross sections and lengths
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently dock materials to length according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to docking material to length
- following organisational policies and procedures relevant to docking material to length
- cutting material to length in line with the work order and within prescribed organisational tolerances

EVIDENCE GUIDE

Context of and specific resources for assessment

- conducting operator maintenance on a docking saw
- stacking batches of cut material in line with organisational requirements and OHS regulations
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board products
- coated and/or treated timber products
- beams, including laminated beams

Organisational requirements
may include:

Material may include:

RANGE STATEMENT

Work order is to include:

- instructions for the cutting and despatch of timber and timber products from the work site

and may include:

- type
- size
- length
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment is to include:

- procedures for saw lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- measuring equipment
- power-operated, manually-controlled docking and trimming saws, where the cutting angle is controlled relative to the board guides and clamps
- saws with adjustable angle
- saws with one blade
- radial arm saws
- table saws
- bench saws
- saws with automatic feed

Cutting patterns and saw setup sequences

are to be limited to single angles requiring one cutting pass or single vertical cuts

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm

RANGE STATEMENT

- understanding
- use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Checking** may include:
- required nominal lengths in conjunction with the grading manual and appropriate Australian Standard
- Tolerance** is a set limit for cutting over or under the required length within a set margin of acceptance usually + or - 0.5 mm or in line with order or organisational requirements
- Features** may include:
- warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
- Disposing of** may include:
- recycling material with features, incorrect cuts and off-cuts
 - re-using material with features, incorrect cuts and off-cuts
 - redirecting material with features, incorrect cuts and off-cuts for energy recovery
- Stacking** may include:
- preparing for transport
 - categorising in common size
 - length and angle
 - marking lots in line with work order and site requirements
 - locating so as not to block access or passage
- Dealing with** may include:
- repairing or sending for repair blunt or damaged saws and saw blades
 - recycling blunt or damaged saws and saw blades that cannot be repaired
 - sending blunt or damaged saws and saw blades that cannot be repaired to landfill

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2230B Assemble products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare and assemble construction-ready products; and to stack, strap and despatch them in readiness for transport to a construction site

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2230A Assemble products

Application of the Unit

Application of the unit The unit involves assembling products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|--|
| 1. Prepare for assembly | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to assembling <i>products</i> are identified and followed</p> <p>1.2. <i>Work order</i> and construction plans are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> and <i>assembly hardware</i> are collected</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. <i>Setup jigs</i> required for construction are specified and prepared</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Set up components | <p>2.1. <i>Timber components</i> are selected from pre-cut material in line with the cutting list</p> <p>2.2. Components are positioned and clamped in jigs ready for joining with allowable faults, joins and grain, in line with construction standards and grading rules</p> <p>2.3. Material with <i>defective components</i> is rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.4. Components are stapled to maintain temporary alignment during assembly</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Install assembly hardware	3.1. Assembly hardware is located and selected in line with the construction plans and standards 3.2. Hardware is positioned on joints and installed 3.3. <i>Temporary bracing</i> is nailed or stapled to the product in line with construction standards 3.4. <i>Assembly faults</i> are corrected in line with site procedures
4. Prepare products for despatch and report outcomes	4.1. Finished product is checked and labelled in line with the work order 4.2. Components are removed from jigs and safely <i>stacked</i> in a designated location in line with work order requirements 4.3. Finished products are <i>strapped</i> , packed and labelled ready for transportation 4.4. Strapping waste is minimised and <i>dealt with</i> in line with site procedures, manufacturer recommendations and environmental requirements 4.5. <i>Equipment faults</i> are recognised and reported in line with site procedures 4.6. <i>Records and reports</i> are accurately completed, processed and maintained in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely assemble products
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for assembling products
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify

REQUIRED SKILLS AND KNOWLEDGE

problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assembling products
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber) and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for assembling products
- Environmental risks and hazards
- Criteria for recycling and re-using material with defective components
- Characteristics of timber and timber defects
- Products and their use
- Assembly sequences and jigs, componentry and construction standards
- Industry standard cross sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assemble products according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

competency in this unit

demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to assembling products
- following organisational policies and procedures relevant to assembling products
- assembling products in line with the work order, construction plans and construction standards
- stacking and strapping bundles of completed products in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and

RANGE STATEMENT

- Environmental requirements may include:**
- carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Products may include:**
- pallets
 - crates
 - trellises
 - stairs
 - doors
 - windows

RANGE STATEMENT

- Work order** is to include:
- beams
 - instructions for the assembly and despatch of timber and timber products from the work site
- and may include:
- construction plans or drawings
 - type of product
 - size
 - quantity and grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Material** may include:
- native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - stress and non-stress graded timber
 - preservative treated timber
 - medium density fibreboard
 - laminated veneer
 - chipboard
 - fibreboard and other manufactured board products
 - coated and/or treated timber products
 - beams, including laminated beams
- Assembly hardware** may include:
- nailing plates
 - gang nails
 - nail gun nails
 - staples
- Equipment** may include:
- measuring equipment
 - assembly jigs
 - nail plate presses
 - staple guns
 - nail guns
 - compressor or compressed air supply

RANGE STATEMENT

- Setup jigs** may include:
- marking equipment
 - strapping equipment
 - enterprise manufactured templates that assist in the positioning of components during the assembly process
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Timber components** are the sections of timber or timber product which have been pre-cut in readiness for assembly and have been cut in line with the construction plans and cutting list
- Defective components** may include:
- components with an unacceptable level of:
 - warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
- Disposing of** may include:
- recycling material with defective components
 - re-using material with defective components
 - redirecting material with defective components for energy recovery
- Temporary bracing** may be fixed to secure the assembled product in alignment and square during transportation, moving and positioning on site
- Assembly faults** may include:
- incorrectly positioned joints
 - timber splits from nailing
 - incorrectly positioned hardware
- Stacking** may include:
- preparing for transport
 - categorising in common size and shape

RANGE STATEMENT

- Strapping** may include:
- marking lots in line with work order and site requirements
 - locating so as not to block access or passage
 - securing bundles with metal or plastic strap
 - tightening and tensioning using hand-held equipment to prevent slippage, strap breakage and damage to products
- Dealing with** may include:
- recycling strapping waste
 - sending strapping waste to landfill
- Equipment faults** may include:
- damaged equipment components
 - electrical faults
- Records and reports** may include:
- product type and size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2231B Pack products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to plan and pack routine and special orders, and to modify routine orders in readiness for despatch to customers

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2231A Pack products

Application of the Unit

Application of the unit The unit involves packing products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------|---|
| 1. Prepare for packing | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to packing <i>products</i> are identified and followed</p> <p>1.2. Number of items, type of material to be packed, and method of <i>transport</i> are selected from <i>work orders</i> in line with site procedures</p> <p>1.3. Material to be packed is assessed for strength, flexibility and liability to damage during the packing process or when being moved</p> <p>1.4. Planned pack sizes and weights are consistent with <i>handling systems</i> at despatch and delivery site</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Pack orders | <p>2.1. <i>Packing material</i> is selected to suit the specific order requirements</p> <p>2.2. Standard site <i>packing methods</i> that meet relevant regulations and site requirements are applied in line with site procedures</p> <p>2.3. <i>Stacking, bracing and strapping</i> methods are selected to provide strength and minimise damage during transport</p> <p>2.4. <i>Labelling</i> methods are selected and applied in line with site procedures</p> <p>2.5. Bracing and strapping waste material is minimised and <i>dealt with</i> in line with site procedures, manufacturer recommendations and environmental requirements</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Modify packing of routine orders	<p>3.1. <i>Changes</i> to type or quantity of material to be packed are assessed</p> <p>3.2. Transport or packing methods are reviewed or altered</p> <p>3.3. Pack <i>handling problems</i> or material damage as a result of changes are reported and corrected</p> <p>3.4. Changes resulting in potential major problems are reviewed with the customer</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely pack products
- Communication skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for packing products; use appropriate communication and interpersonal techniques with colleagues and others; locate and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for packing products
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for packing products
- Environmental protection requirements, including the safe disposal of waste material, and the minimisation of carbon emissions
- Organisational and site standards, requirements, policies and procedures for packing products
- Environmental risks and hazards
- Criteria for recycling and re-using bracing and strapping waste material
- Characteristics of pack shift and movement

REQUIRED SKILLS AND KNOWLEDGE

- Products and their use
- Packing sequences and weight distribution
- Packing methods and applications
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan for and pack products according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to packing products
- following organisational policies and procedures relevant to packing products
- planning for and packing products in line with work order, customer requirements, site procedures and regulations
- stacking, bracing, strapping and labelling packs of products in line with organisational requirements and OHS regulations

Context of and specific resources for

- Competency is to be assessed in the workplace or realistically simulated workplace

EVIDENCE GUIDE

assessment

- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment

EVIDENCE GUIDE

task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards

RANGE STATEMENT

- confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Products** may include:
- packs of timber
 - pallets
 - crates
 - trellises
 - trusses
 - stairs
 - doors
 - windows
 - frames
 - beams
- Transport** may include:
- trucks
 - vans
 - utilities
 - trains
 - planes
 - ships
- Work order** is to include:
- instructions for the packaging and despatch of timber and timber products from the work site

RANGE STATEMENT

and may include:

- pack sizes
- weights
- type of product
- size
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Handling systems are to include:

- hydraulic hoists
- truck-mounted loading cranes
- trolley jacks
- fork lifts
- gantry cranes
- loaders

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Packing material may include:

- boxes
- pallets
- bearers
- braces
- spacers
- wrapping
- strapping

Packing methods may include:

- manual loading
- mechanical loading
- mechanical lifting equipment, which may include:
 - fork lifts
 - slings

RANGE STATEMENT

- trolley jacks
 - gantry cranes
 - hydraulic hoists
 - truck mounted loading cranes
 - loaders
 - manual lifting, such as involving two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- Stacking** may include:
- preparing for transport
 - categorising in common size and shape
 - marking lots in line with work order and site requirements
 - locating so as not to block access or passage
- Bracing** may be fixed to secure the packed product in alignment and square during transportation and to prevent movement or sliding
- Strapping** may include:
- securing bundles with metal or plastic strap
 - tightening and tensioning using hand-held equipment or automated strapping machines to prevent slippage without risk of strap breakage or damage to products
- Labelling** may include:
- client identification
 - destination
 - address
 - contents
 - special instructions
 - handling instructions
- Dealing with** may include:
- recycling bracing and strapping waste material
 - re-using bracing and strapping waste material
 - redirecting bracing waste material for energy recovery
 - sending bracing and strapping waste to landfill
- Changes** may include:
- special orders, which include specially manufactured items that may require unusual packing requirements
- Handling problems** may include:
- overweight packs
 - oversize packs
 - weight distribution or balance problems
 - damage to goods
 - product or equipment malfunction

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2232B Cut material to shape using a saw

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and cut material to shape using sawing equipment in order to produce shaped timber products. This unit includes equipment maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2232A Cut material to shape using a saw

Application of the Unit

Application of the unit

The unit involves cutting material to shape using a saw in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for shaping	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to cutting material to <i>shape</i> using a saw are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be shaped is selected from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Profile to be cut is identified and cutting blades are selected</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set up shaping equipment	<p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Machine guides</i> are selected and attached to the machinery</p> <p>2.3. Saw blade in the selected machinery is checked to be sharp and correctly aligned</p> <p>2.4. Cut is set in line with the required shape and</p>

ELEMENT**PERFORMANCE CRITERIA**

- minimisation of waste
- 2.5. Off-cuts are *disposed of* in line with site procedures and environmental requirements
- 2.6. Material stack is positioned in close proximity to maximise ease of machine feeding
- 2.7. Equipment setup is checked and adjusted by running a piece of timber through the machine to check alignment
3. Cut material to shape
- 3.1. Material is fed into the machine at the *feed rate* prescribed by manufacturer's recommendations
- 3.2. Cutting sequence is followed, maintained and adjusted to produce the required shape and quantity of shaped products
- 3.3. Jig or shape line is regularly checked and adjusted to maintain the desired cut
- 3.4. Material with *features* is rejected and disposed of in line with site procedures and environmental requirements
- 3.5. Processing and equipment faults are reported to appropriate personnel
- 3.6. Material is safely *stacked* in designated location in line with work order
- 3.7. *Records and reports* are accurately completed, processed and maintained in line with workplace procedures
4. Conduct operator maintenance
- 4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 4.2. Saw blade is checked for blunt or damaged condition in line with site procedures
- 4.3. Saw blade is removed, replaced and *dealt with* in line with site procedures, manufacturer recommendations and environmental requirements
- 4.4. Machine area is kept clear of dust and debris in line with OHS and environmental requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely cut material to shape
- Communication skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for cutting material to shape; use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for cutting material to shape using a saw
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for cutting material to shape using a saw
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), and the minimisation of carbon emissions
- Organisational and site standards, requirements, policies and procedures for cutting material to shape using a saw
- Environmental risks and hazards
- Criteria for recycling and re-using off-cuts or material with features
- Characteristics of timber and timber features
- Shapes, feed rates and finish
- Methods for assessing condition of saw blades
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently cut material to shape using a saw in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to cutting material to shape using a saw
 - following organisational policies and procedures relevant to cutting material to shape using a saw
 - cutting material to shape in line with the work order and prescribed organisational specifications
 - conducting operator maintenance on a bandsaw
 - stacking batches of cut material in line with organisational requirements and OHS regulations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment

EVIDENCE GUIDE

Guidelines of the FPI11 Training Package

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

RANGE STATEMENT

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement

RANGE STATEMENT

processes and standards

- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Shapes may include:

curved shapes for:

- construction
- furniture components

Work order is to include:

- instructions for the cutting and despatch of timber and timber products from the work site

and may include:

- type
- size
- length
- profile
- thickness
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard

RANGE STATEMENT

- Storage locations** may include:
- fibreboard and other manufactured board products
 - coated and/or treated timber products
 - beams, including laminated beams
 - storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** is to include:
- procedures for machine lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- measuring equipment
 - band saws
 - jig saws
 - other shaping equipment
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences

RANGE STATEMENT

- control of tone of voice
- Pre-startup checks** are conducted to ensure:
- machine has been set up correctly
 - blade is installed accurately
 - machine is operating to optimum performance
- Machine guides** may include:
- machine manufacturer produced guides located strategically on the machine to maintain timber in straight feed and ensure consistency of shape cut
 - enterprise produced guides/jigs to maintain consistency of timber against the saw blade
- Disposing of** may include:
- recycling off-cuts or material with features
 - re-using off-cuts or material with features
 - redirecting off-cuts or material with features for energy recovery
- Feed rate** is the rate of speed the material is passed through the machine affecting the sharpness of the saw blade, the finish of the material, and the production output
- Features** may include:
- warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
- Stacking** may include:
- preparing for transport
 - categorising in common size, length and angle
 - marking lots in line with work order and site requirements
 - locating so as not to block access or passage
- Records and reports** may include:
- product type and size
 - profile
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions

RANGE STATEMENT

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Dealing with may include:

- repairing or sending for repair blunt or damaged saw blades
- recycling blunt or damaged saw blades that cannot be repaired
- sending blunt or damaged saw blades that cannot be repaired to landfill

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2233B Navigate in forest areas

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to navigate in forest areas in situations where difficult environmental conditions and poor visibility are likely to occur. The unit includes interpretation and use of maps and other navigation aids

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2233A Navigate in forest areas

Application of the Unit

Application of the unit

The unit involves navigating in forest areas in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for navigation	<p>1.1.Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to navigating in forest areas are identified and followed</p> <p>1.2.<i>Information</i> is gathered and <i>relevant factors</i> are identified and checked with <i>appropriate personnel</i></p> <p>1.3.Suitable <i>maps, equipment</i> and <i>navigation aids</i> are selected and checked for accuracy, currency and operational effectiveness in line with manufacturer recommendations</p> <p>1.4.Faults or errors in maps and equipment are detected and corrected</p> <p>1.5.<i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Plan the route	<p>2.1.Route is planned according to assignment instructions and OHS requirements</p> <p>2.2.Maps are examined to identify relevant <i>symbols, information, navigation data and environmental requirements</i></p> <p>2.3.Emergency or contingency exit routes are planned</p> <p>2.4.<i>Limitations</i> in planning are specified and assistance is sought in line with organisational requirements</p>
3. Conduct navigation	<p>3.1.Navigation is undertaken according to planned route</p>

ELEMENT	PERFORMANCE CRITERIA
	and schedule
	3.2. Maps are correctly orientated to <i>surroundings</i> according to planned route
	3.3. Equipment and navigation aids are used in line with manufacturer recommendations
	3.4. Alternative routes are navigated to bypass <i>obstacles</i> and improve efficiency of route or course
	3.5. Impact on the environment as a result of navigation is minimised

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment
- Communication skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for navigating in forest areas; use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for navigating in a forest area
- Numeracy skills sufficient to calculate bearings using maps and compass correctly
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures; interpret maps, charts, distances, relevant symbols, map meaning and line types; estimate resource and equipment requirements; solve problems and bypass obstacles; locate own position on a map

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for navigating in forest areas
- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for navigating in forest areas

REQUIRED SKILLS AND KNOWLEDGE

- Environmental risks and hazards
- Types of maps and charts, and their uses
- Representation of topographic features on maps and plans
- Common scales used on maps and plans
- Features and use of a compass and factors that affect its accuracy
- Advantages and disadvantages of different map and chart types and sources of error
- Techniques for estimating distance travelled within a particular activity context
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently navigate in forest areas demonstrating the correct orientation and use of maps, plans and compass

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to navigating in forest areas
- following organisational policies and procedures relevant to navigating in forest areas
- selecting, interpreting and applying maps and other relevant information in written, diagrammatic and

EVIDENCE GUIDE

- verbal form
- using maps, compass and navigation aids to navigate in forest areas, confirming factors affecting the use of navigation equipment
 - planning and conducting navigation by passing obstacles within designated timeframes
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Information may relate to:

- local inhabitants
- type of terrain or features of the route
- access and exit routes
- natural protection or shelter
- land management and legislative requirements
- guide books

Relevant factors may relate to:

- types of terrain and gradient
- weather conditions
- obstacles
- hazards and access to required resources and facilities

RANGE STATEMENT

- distance
 - estimated travelling time
 - magnetic bearings
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
- Maps** may include:
- cadastral and topographic maps
 - charts
 - guide books
 - aerial photographs
 - sketches
 - cave maps
 - diagrams
- Equipment** may include:
- compass
 - track and survey markers
 - beacons
 - personal protective equipment and clothing
 - global positioning system (GPS) units
- Navigation aids** may include:
- track and creek junctions and crossings
 - survey markers
 - beacons
 - track markers
 - paths
 - signs
 - arrows
 - compass and man-made objects or features
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Symbols and information** may include:
- grid lines and numbers
 - contour lines
 - scale

RANGE STATEMENT

- map legend
 - topographic features
 - markers and beacons
 - water depth
- Navigation data** may include:
- grid reference points
 - distances
 - estimated travelling times
 - height gain and loss
 - gradient
 - identifiable features
 - exit routes
- Limitations** may relate to:
- job role and responsibilities
 - own competency level
 - industry requirements
 - own understanding of risk identification processes
 - own interpretation of maps
 - legislation
 - regulations and procedures
 - legal responsibilities
 - OHS environmental requirements
- Surroundings** may include:
- ground or terrain
 - bodies of water
 - beacons and markers
 - natural formations
 - landmarks
 - man-made features
- Obstacles** may include:
- thick vegetation
 - drops and climbs
 - marshes and bogs
 - fog
 - rivers
 - lakes and dams
 - tides
 - hazards, such as rocks

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2235A Assess timber for manufacturing potential

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assess timber for its manufacturing potential for frame and truss construction including the ability to hold nail plates and retain engineered strength ratings with particular attention given to serviceability

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves assessing timber for plating potential in a factory environment, usually as part of production of prefabricated trusses, frames and/or floors

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------|--|
| 1. Prepare for assessing | <p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational</i> requirements relevant to assessing <i>timber</i> for manufacturing potential are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Visual assessment processes are planned in line with site procedures</p> <p>1.4. Type and quantity of <i>material</i> to be visually assessed is acquired from the storage location</p> <p>1.5. <i>Tools and equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS and organisational requirements</p> |
| 2. Assess timber | <p>2.1. Material requirements for storage or subsequent processing operations are selected</p> <p>2.2. Characteristics and defects of material are assessed against industry and Australian <i>Standards</i> in determining plating potential</p> |

ELEMENT	PERFORMANCE CRITERIA
	2.3. Defects are clearly identified prior to plating or sawing in line with site requirements
	2.4. Timber components are orientated to make best use of the characteristics
	2.5. Timber assessed as unsuitable for plating is identified for reprocessing to minimise wastage
	2.6. Assessment outcomes and distribution problems are recorded and reported to appropriate personnel in line with site procedures
3. Distribute material	3.1. Material is directed and moved to storage or processing operations in line with site requirements
	3.2. Sub-standard materials are rejected and disposed of in line with site requirements to minimise wastage
	3.3. On-site movement of material is monitored to ensure intended flow is achieved
	3.4. Material is labelled in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to identify and assess a range of timber characteristics likely to impact on nail plate holding ability and to orientate components to ensure optimum utilisation of the resource
- Communication skills sufficient to liaise with co-workers and supervisors to ensure efficient work flow
- Literacy skills sufficient to identify and record timber characteristics impacting on nail plate holding ability
- Numeracy skills sufficient to measure, estimate and record size of undesirable timber characteristics
- Problem solving skills sufficient to identify and resolve work flow problems resulting from undesirable timber characteristics
- Planning and organisational skills sufficient to plan visual assessment processes

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assessing timber for plating potential
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for assessing timber for plating potential
- Knowledge of materials handling and transport systems
- Orientation of components to ensure products conform with manufacturing guidelines
- A range of timber characteristics likely to affect nail plate holding ability
- A range of industry standard timber species, lengths, cross sections and grades that may affect nail plate holding ability
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment used for assessing timber and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can assess timber for manufacturing potential

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to assessing timber for

EVIDENCE GUIDE

- plating potential
- following organisational policies and procedures relevant to assessing timber for plating potential
 - the application of knowledge of timber characteristics to make an accurate assessment of the potential of a piece of timber to be used for a particular component of trusses, and/or frames and/or floors
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to comply with relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency

EVIDENCE GUIDE

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- fatigue management
- hazard and risk control
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

RANGE STATEMENT

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Timber** characteristics may include:
- bow, spring and twist
 - wane/want and collapse
 - cupping and other distortion
 - knots and knot holes
 - borer damage
 - gum/resin veins and pockets
 - decay
 - end splits, internal checks and surface checks
 - low density material
 - compression failures and fractures
 - durability
 - heart in material
 - joint strength
- Work order** may include:
- type
 - size

RANGE STATEMENT

- length
 - angle
 - quantity
 - grade
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Material** may include:
- native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - stress and non-stress graded timber
 - preservative treated timber
 - laminated veneer coated and/or treated timber products
 - beams or laminated beams
- Tools and equipment** may include:
- charts
 - gauges
 - standard operating procedures
 - picture cards
 - measuring equipment
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - use of electronic devices
- Standards**
- are those contained in Australian Standards and additional requirements established by the client or nail plate producer
- Records and reports** may include:
- stress-grading requirements
 - product type
 - size
 - inspection
 - grading and marking outcomes
 - storage locations
 - quality outcomes
 - hazards, incidents or equipment malfunctions
- and may be:

RANGE STATEMENT

- manual
- using a computer-based system or another appropriate organisational communication system

On-site movement of material may include the use of:

- trolley use
- fork lift
- pallet truck

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2236 Fall trees manually (basic)

Modification History

Version	Detail
1	Unit replaces FPIFGM2208A Fall trees manually (basic) and FPIHAR2202A Harvest trees manually (basic)

Unit Descriptor

This unit describes the outcomes required to assess, plan and safely carry out manual tree-felling operations using a chainsaw.

It is an introductory or base-level unit that covers the felling procedures for relatively small trees with a low level of complexity.

Techniques for trees with a diameter greater than the bar length, while not excluded, would generally be regarded as techniques beyond the scope of this unit.

Application of the Unit

This unit involves tree felling in a variety of work settings, which may include a forest, agricultural, domestic, local council, and emergency services and other government agency environment.

With the exception of minor forest produce, it is not considered a suitable level for commercial harvesting operations.

These skills and knowledge are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions.

Pre-Requisites

Not applicable

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for felling

- 1.1. Identify and adhere to work specifications and site *environmental protection measures* relevant to felling *basic trees* in line with *organisational requirements* and relevant regulations
- 1.2. Review and check *job requirements* as required with *appropriate personnel*
- 1.3. Select and check *tools and equipment* appropriate to work requirements for operational effectiveness according to manufacturer recommendations
- 1.4. Identify trees to be retained and felled
- 1.5. Establish general falling direction
- 1.6. Determine and progressively plan tree felling sequence for individual trees
- 1.7. Establish and maintain *communication* with others according to occupational health and safety (OHS) requirements

2. Visually assess site conditions and surroundings

- 2.1. Review location and stability for conditions likely to affect felling activities
- 2.2. Monitor movement and location of activity in the work area and modify plan for felling activity according to OHS regulations
- 2.3. Identify and report site *environmental conditions* to appropriate personnel
- 2.4. Identify and control potential and existing risks and *hazards*
- 2.5. Identify and monitor other personnel working on the site

3. Assess tree and plan felling
- 3.1. Identify *trees considered outside own skill level* and seek assistance from appropriate personnel
 - 3.2. Visually assess tree for felling characteristics, defects and stresses
 - 3.3. Determine and check required falling direction and possible deviation
 - 3.4. Plan sequence of cuts to fell tree according to standard felling procedures
 - 3.5. Select suitable escape route
 - 3.6. Clear work site and escape route of debris and growth according to environmental care principles and statutory requirements
4. Apply tree felling techniques
- 4.1. Fell individual trees using selected *cutting techniques* according to OHS and job requirements
 - 4.2. Adjust cutting technique in response to movement and condition of tree
 - 4.3. Use planned escape route when tree starts to fall
 - 4.4. Monitor fall and movement of tree on ground until determined stable
 - 4.5. Identify and implement procedures for removal of trees that are hung-up
 - 4.6. Dispose of waste materials in line with environmental and operational requirements
5. Maintain equipment
- 5.1. Inspect equipment on completion of trimming and cutting activities
 - 5.2. Identify damaged saws and cutting attachments for repair or replacement according to organisational requirements and manufacturer recommendations
 - 5.3. Remove, clean, adjust or replace chain and other components according to manufacturer recommendations
 - 5.4. Maintain tools and equipment according to OHS requirements and manufacturer recommendations

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- Awareness of legislation, regulations, standards, codes of practice and established safe practices and procedures for felling trees manually
- Technical skills to:
 - use and maintain relevant tools and equipment
 - safely operate and maintain a chainsaw
 - assess, plan and carry out tree-felling operations appropriate to site conditions
- Communication skills to:
 - use appropriate communication and interpersonal techniques and methods with colleagues and others
 - use hand signals with other operators to maintain effective and safe tree felling
- Literacy skills to:
 - locate and report information
 - interpret, apply and convey information in written, diagrammatic and verbal form
- Numeracy skills to:
 - estimate tree height
 - calculate product mass and determine tree fall zone
 - measure tree length and diameter
- Problem-solving skills to:
 - review and identify work requirements
 - identify appropriate trees to be felled at basic level: small in size and low in complexity
 - recognise own limitations given the conditions and trees for felling
 - assess that capacity of equipment is appropriate to tree being felled
 - identify equipment faults and problems and demonstrate appropriate response procedures
 - apply safe work practices, including the use of personal protective equipment (PPE) and control of hazards

Required knowledge:

- Basic knowledge of applicable federal, state or territory legislation, regulations, standards and codes of practice relevant to the full range of processes for felling trees manually
- Key characteristics of trees that are considered to be in the basic, intermediate and advanced categories
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for felling trees manually
- Types of tools and equipment used when felling trees manually, and the procedures for their safe use, operation and maintenance

- Problem identification and resolution strategies and common fault-finding techniques applicable to tree felling
- Established communication channels and protocols
- Key features of structural defects and stresses in trees to enable their identification and evaluation
- Types and purposes of a range of cuts to fell trees
- Operational principles and limitations of a chainsaw
- Procedures for recording and reporting workplace information

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently fell trees manually according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- compliance with applicable federal, state or territory legislative and regulatory requirements and codes of practice relevant to felling trees manually
- compliance with organisational policies and procedures relevant to felling trees manually
- compliance with applicable licensing or certification requirements relevant to felling trees manually
- communicating effectively and working safely with others in the work area
- Identifying key features of structural defects and stresses in trees and the impact on felling trees at the basic level contributing to a tree and conditions assessment, and planning for and felling trees within the range of variables for trees and conditions
- planning felling sequence of basic trees and prepare surroundings including escape route
- felling a range of basic trees using a range of cuts safely without damage to personnel, equipment and surrounding environment
- selecting, using and maintaining appropriate tools and equipment for felling basic trees manually, and recognising faults, problems and malfunctions

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory requirements and Australian standards
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work

applicable to this unit

- specifications and work instructions

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Environmental protection measures may include:

- action to limit the impact to:
 - native vegetation
 - soil and water
 - heritage and archeological artefacts
 - flora and fauna
 - geomorphologic features
 - landscape
 - external site pollution
 - recreational opportunities
 - regeneration opportunities

Basic trees typical to the scope of this unit may include the following characteristics:

- lean and distribution of the crown weight does not create a complex situation to assess or fell
- small dimensions relative to local forest size distribution
- no excessive lean
- no visible damage or defect
- species that are not prone to free splitting and adverse reactions during felling
- a crown that is free of hazards, entanglement or malformation, and is fully visible for assessment and monitoring
- single stem or non-complex multi-stems
- diameter of tree is less than chainsaw bar length
- grown on terrain and slope that does not add significant complexity to the operation

Organisational requirements may include:

- legal compliance documentation
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- OHS requirements, that are in accordance with applicable federal, state or territory legislation and regulations, and organisational safety policies and procedures, including:
 - PPE and clothing
 - safety equipment
 - first aid equipment

- firefighting equipment
- hazard and risk control
- fatigue management
- appropriate signage
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- techniques for manual handling, including shifting, lifting and carrying
- legislative requirements that are to be in accordance with applicable federal, state or territory legislation, regulations, certification requirements and codes of practice, including:
 - award and organisational agreements
 - industrial relations
 - Australian standards
 - confidentiality and privacy
 - OHS
 - the environment
 - native vegetation
 - equal employment opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements, including waste disposal, recycling and re-use guidelines

Job requirements may include:

- information and instructions relevant to tree-felling operations, including:
 - processing location details
 - trees to be felled and retained
 - general environmental requirements, including site plan and environmental features

- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - managers
- Tools and equipment** may include:
- warning signs
 - chainsaw and components
 - PPE and clothing
 - first aid equipment
 - maintenance requirements
 - support tools
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening and questioning to clarify and confirm understanding
 - electronic communication devices
- Environmental conditions** may relate to:
- ground growth
 - canopy
 - general forest lean
 - ground slope
 - ground hazards
 - wind speed and direction
- Hazards** may include:
- uneven/unstable terrain
 - unsafe trees
 - fires
 - overhead and underground services
 - excavations
 - traffic
 - structures
 - hazardous materials
 - insects and animals
 - other personnel and machinery
- Trees considered outside**
- trees that contain hazards and are deemed unsafe

own skill level may include:

- trees where cuts made may lead to loss of control of tree in felling
- trees that are considered to be in the intermediate or advanced categories

Cutting techniques:

- will be suited to small non-complex felling situations and will include:
 - scarf cutting
 - back cutting to provide hinge-wood and maintain control of tree
- and may include:
 - use of wedges to assist in controlling falling direction

Unit Sector(s)

Common Technical

Competency field

Competency field n/a

FPICOT2237A Maintain chainsaws

Modification History

FPI11 V2

Mapping updated to reflect that this unit supersedes and is equivalent to FPICOT2204A & FPICOT2204B

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to carry out maintenance of hand-held chainsaws. It relates to the maintenance and servicing requirements of chainsaw powerheads and cutting attachments; chain sharpening, cleanup, storage procedures and recording requirements

General legislative, regulatory and workplace requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2204B Maintain chainsaws

Application of the Unit

Application of the unit

The unit involves maintaining chainsaws in a variety of work settings including a forest environment, agricultural, workshop, horticultural and domestic settings

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for maintenance	<p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative, organisational requirements</i> and manufacturer's specifications relevant to the maintenance of <i>chainsaws</i> are identified and followed</p> <p>1.2. Suitable personal protective equipment and/or clothing is selected, used and maintained</p> <p>1.3. Job requirements are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.4. Tools, equipment and materials are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations and site operating procedures</p> <p>1.5. Potential and existing risks and <i>hazards</i> in the work area are identified and controlled</p>
2. Conduct chainsaw maintenance	<p>2.1. <i>Frequent/daily services</i> are carried out in line with manufacturer's recommendations and organisational requirements</p> <p>2.2. <i>Periodic services</i> are carried out in line with manufacturer's recommendations and organisational requirements</p> <p>2.3. Chain and other components are removed,</p>

ELEMENT	PERFORMANCE CRITERIA
3. Complete maintenance records and clean up	<p>sharpened, <i>maintained</i>, adjusted or replaced in line with manufacturer's recommendations</p> <p>2.4. Serviced chainsaw components are reassembled and checked for operational effectiveness</p> <p>2.5. Chainsaw is tagged and stored</p> <p>3.1. <i>Records and reports</i> are accurately completed, processed and maintained in line with workplace procedures</p> <p>3.2. Chainsaw faults, malfunctions or irregular operation are identified, tagged and reported for repair or replacement</p> <p>3.3. Work area is cleared and waste materials disposed of, or recycled, in line with organisational <i>environmental policies and procedures</i></p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, conduct routine maintenance procedures and to apply mechanical reasoning
- Communication skills sufficient to discuss work orders with colleagues and others
- Literacy skills sufficient to read and interpret work requirements and specifications and to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure, calculate time required to complete a task and calculate fuel/oil ratios
- Problem solving skills sufficient to troubleshoot and identify problems and equipment faults, and apply appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for maintaining chainsaws
- Environmental protection requirements, including the safe disposal of waste material

REQUIRED SKILLS AND KNOWLEDGE

- Organisational and site standards, requirements, policies and procedures for maintaining chainsaws; organisational communication channels and protocols; and procedures for the recording and reporting of workplace documentation and information
- Types of tools and equipment required for the maintenance of hand-held chainsaws and the procedures for their safe use, operation and maintenance
- Types, functions, specifications and operational principles of chainsaws
- Specifications and types of bars, chains and sprockets
- Chainsaw routine maintenance procedures
- Potential hazards and risks when maintaining chainsaws including fire hazards and prevention
- Problem identification and resolution strategies and common fault finding techniques

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely carry out a maintenance service and adjustment of hand-held chainsaws

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS and environmental and manufacturer's specifications relevant to maintaining chainsaws
- following organisational policies and procedures relevant to workplace requirements when maintaining chainsaws
- communication with others in the workplace
- maintenance and adjustment procedures of chainsaws in line with manufacturer's recommendations

EVIDENCE GUIDE

- selection and use of appropriate tools, equipment and materials to carry out maintenance of chainsaws
 - identification and diagnosis of chainsaw faults, malfunctions or irregular operations
 - sharpening and tensioning of saw chain
 - application of tagging, repairing, reporting and recording processes
 - maintenance, storing and cleaning of tools and work area
 - safe disposal of waste materials
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to comply with relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred

EVIDENCE GUIDE

to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- Australian Standards
- OHS
- the environment
- equal opportunity
- relevant industry codes of practice
- award and enterprise agreements
- industrial relations
- confidentiality and privacy
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS
- emergency and evacuation procedures
- fire prevention procedures
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)
- access and equity principles and practices

Chainsaws may include:

- engine or electrically operated hand-held chainsaws

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- line management

Hazards may include

exposure to:

- loud noise and exhaust fumes

RANGE STATEMENT

- mechanical vibration
- hazardous substances (fuel)
- cuts and hot surfaces
- rotating parts

Frequent/daily services

are to be conducted in line with manufacturer's instructions and may include:

- removing, checking and cleaning air filter for damage and penetration of foreign material
- cleaning saw body, air intake vents and cooling fins
- cleaning chain brake
- inspecting chain and guide bar
- checking screws/nuts for tightness
- checking safety devices
- filling fuel tanks and chain oil tanks

Chain checks are to be conducted in line with manufacturer's instructions and may include:

- inspecting and adjusting chain
- inspecting and replacing chain that is worn, damaged or incorrectly sharpened
- sharpening a range of chain types and setting of depth gauges without supervision

Periodic services

are to be conducted in line with manufacturer's instructions and may include:

- replacing drive sprocket
- cleaning or replacing and setting spark plug
- checking and replacing fuel filter
- checking chain brake, oil system, flywheel assembly, anti-vibration system, muffler and spark arrestor
- inspecting and replacing starter cord and starter spring
- matching pitches and gauges of cutting components
- dressing and cleaning cutter bar
- cleaning fly wheel
- removing and cleaning exhaust and fire screen
- sharpening

Maintenance must include:

Records and reports may

- log book recording of maintenance outcomes,

RANGE STATEMENT

include:

faults, malfunctions and damage, hazards and incidents

- may be compiled using a computer-based system or other appropriate organisational communication system to record and report
- waste disposal
- recycling
- re-use

Environmental policies and procedures may relate to:

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT2238A Cut materials with a hand-held chainsaw

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare and cut materials with a hand-held chainsaw. This unit includes basic operator maintenance checks

More comprehensive servicing and maintenance procedures are covered in FPICOT2237A Maintain chainsaws

General legislative, regulatory and workplace requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT2206B Cross cut materials with an hand-held chainsaw

Application of the Unit

Application of the unit The unit involves cutting materials with a hand-held chainsaw in a variety of work settings including a construction, saw mill, forest products factory, timber retail yard or horticultural environment

The skills and knowledge required for competent performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------|---|
| 1. Prepare for operation | <p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative, organisational requirements</i> and manufacturer's specifications relevant to cutting <i>materials</i> with a hand-held chainsaw are identified and followed</p> <p>1.2. <i>Job requirements</i> are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. <i>Tools and equipment</i> are selected appropriate to job requirements and checked for operational effectiveness in line with manufacturer's recommendations and site procedures</p> <p>1.4. Tasks are identified and planned in line with job requirements</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements and site procedures</p> <p>1.6. Requirements for recycling or disposal of waste material are identified</p> |
| 2. Cut material | <p>2.1. Work area is prepared, checked and <i>cleared</i> in line with OHS requirements and site procedures</p> |

ELEMENT**PERFORMANCE CRITERIA**

- | | | |
|----|------------------------------|---|
| 3. | Conduct chainsaw maintenance | <p>2.2. Supports are placed as required to ensure a stable base</p> <p>2.3. Material is visually assessed for defects in line with site standards</p> <p>2.4. Cutting techniques are used to maximise volume and quality of recovery in line with work order and industry standard lengths</p> <p>2.5. Material is cut within site standard tolerances for length and angle relative to centre line in line with OHS requirements</p> <p>2.6. Chainsaw is operated in line with OHS and site procedures, and manufacturer's recommendations</p> <p>2.7. Debris is cleared and disposed of in line with site procedures and environmental requirements</p> <p>2.8. Production and quality records and reports are processed in line with site procedures and organisational requirements</p> <p>2.9. Problems are identified and reported in line with site procedures</p> <p>3.1. Damaged saws or cutting attachments are identified and dealt with according to site procedures and manufacturer's recommendations</p> <p>3.2. Chainsaw is cleaned, maintained and stored in line with manufacturer's recommendations and site procedures</p> |
|----|------------------------------|---|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to safely and efficiently use a hand-held chainsaw and carry out lock-out procedures on associated machinery; use and maintain relevant tools, machinery and equipment; use appropriate methods to cut materials with a hand-held chainsaw and maximise volume and quality recovery
- Communication skills sufficient to interact effectively with colleagues and others

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to review and accurately identify work requirements and accurately locate, record and report information
- Numeracy skills sufficient to estimate and measure lengths and calculate time to complete a task
- Problem solving skills sufficient to identify defects and problems and appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for cutting materials with a hand-held chainsaw
- Organisational and site standards, requirements, policies and procedures for cutting materials with a hand-held chainsaw; organisational communication channels and protocols; and procedures for the recording and reporting of workplace documentation and information
- Environmental protection requirements including the safe disposal of waste material
- Operation and maintenance requirements of a hand-held chainsaw including consequences of blunt or damaged saws
- Effects of defects on recovery
- Common industry terminology
- Communication and interpersonal techniques
- Industry standard length dimensions
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can use a hand-held chainsaw while demonstrating the correct procedures for cutting materials in line with organisational guidelines

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS and environmental, relevant to cutting materials with a hand-held chainsaw
- following organisational policies and procedures relevant to cutting materials with a hand-held chainsaw
- following applicable licensing or certification requirements
- effective communication and safe working practices
- safe cutting of materials using a hand-held chainsaw
- cutting materials to maximise volume and quality of recovery according to job requirements
- cleaning, maintaining and storing saw
- identifying and reporting faults, malfunctions or irregular operation of hand-held chainsaw
- appropriate recycling or disposal of waste materials

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE

application of underpinning knowledge

- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and

RANGE STATEMENT

may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- awareness of danger zone for kickback
- manual handling including shifting, lifting and carrying
- potential falling objects
- procedures for cutting on slopes
- location of other workers

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- Australian Standards
- OHS
- the environment
- equal opportunity
- relevant industry codes of practice
- award and enterprise agreements
- industrial relations
- confidentiality and privacy
- duty of care
- heritage and traditional land owner issues
- legal

Organisational requirements

may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS
- emergency and evacuation procedures
- fire prevention procedures

RANGE STATEMENT

- recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
 - access and equity principles and practices
- Materials** may include:
- logs
 - packs of timber
 - individual pieces of timber
- Job requirements** relate to: information and instructions relevant to cutting operations including:
- processing location details
 - materials to be cut
 - environmental requirements and features
 - site plan
- and may be verbal
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
- Tools and equipment** may include:
- chainsaws
 - specific safety attire
 - maintenance tools
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - use of electronic devices
- Cleared** refers to work area and may include:
- clearing the work area of off-cuts and shorts
 - ensuring saw clearance around material
 - depositing off-cuts, shorts and debris in recognised areas
 - clearing surfaces of debris likely to cause saw damage in the cutting area
- Supports** are timber or mechanical apparatus that are put under material to stabilise and give clearance to ground and may include:

RANGE STATEMENT

- Cutting techniques** may relate to:
- timber bearers
 - specific frames/benches
 - timber/steel trolleys
 - cutting positions
 - work order requirements
 - industry standard lengths
 - cutting patterns
 - maximising volume and quality of recovery
 - securing the section on each side of the planned cut
 - cutting procedures to ensure saw clearance around the material to minimise capping and splitting of material
- Records and reports** may include:
- log book recording of maintenance outcomes, faults, malfunctions and damage, hazards and incidents
 - may be compiled using a computer-based system or other appropriate organisational communication system to record and report

Problems

may occur in relation to:

- defects in material
- performance of chainsaw
- communication
- hazards and risks at the work site
- capping and splitting of material
- danger zone for kickback

Maintained

refers to maintenance during operation to optimise saw performance and includes:

- refuelling
- bar checks and oil top up
- air filter check, clean and replacement
- cleaning of saw body, air intake vents and cooling fans
- fitting spare chain and tension chain

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT2239A Trim and cut felled trees

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to trim and cut felled trees with a chainsaw. It is intended for use in situations where the production of timber is not the primary focus of the activity. The unit also includes equipment maintenance

General workplace legislative and regulatory requirements apply to this unit; specific licensing or certification requirements may apply in some states and territories

This unit replaces FPICOT2221A Trim and cross cut felled trees

Application of the Unit

Application of the unit

This unit involves trimming and cutting felled trees with a chainsaw in a variety of work settings including a forest, agriculture, domestic, local council and emergency services environment, as relevant to the unit

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for trimming and cutting	<p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational requirements</i> and manufacturer's specifications relevant to trimming and cutting felled <i>trees</i> are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> and enterprise environmental management systems are identified and adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Job requirements</i> are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.4. Trimming and cutting activities are planned in line with site procedures</p> <p>1.5. <i>Tools and equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in line with organisational procedures and manufacturer's recommendations</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Visually assess felled trees	<p>2.1. Trees to be trimmed and cut are identified in line with job requirements</p> <p>2.2. <i>Environmental requirements</i> are identified and used</p>

ELEMENT	PERFORMANCE CRITERIA
	to plan the trimming and cutting activities
	2.3. Tree, location and stability are assessed for conditions likely to affect safety of trimming and cutting activities
	2.4. Tree is visually assessed for <i>defects</i>
	2.5. <i>Stresses</i> within the tree are identified
	2.6. Trees unable to be cut safely are identified and referred to appropriate personnel
3. Plan cutting	3.1. Tree is moved or stabilised for safe cutting in line with site standards and regulations
	3.2. <i>Cutting pattern</i> is selected to optimise time and manageable removal of the sections
	3.3. Options for utilisation of product are identified
	3.4. <i>Sequence of cuts</i> is planned to maintain control of cut sections and minimise cutting problems
	3.5. Cut location is determined with consideration of tree stresses
4. Conduct trimming and cutting	4.1. <i>Debris</i> is cleared from the work area to prevent saw damage or injury in line with OHS requirements
	4.2. <i>Pre start-up</i> checks are carried out on equipment in line with site requirements
	4.3. Movement and whereabouts of other personnel is monitored and work is modified in line with OHS regulations
	4.4. Tree section on each side of planned cut is secured and potential movement is assessed and planned
	4.5. Chainsaw is operated to cut tree and limbs with <i>cutting techniques</i> adjusted in response to movement and condition of the tree/limbs
	4.6. Trimming and cutting is completed in line with OHS and job requirements
	4.7. Trimming and cutting <i>records</i> are prepared and problems reported to the appropriate personnel
5. Conduct equipment <i>maintenance</i>	5.1. Equipment is inspected on completion of trimming and cutting activities
	5.2. Damaged saws and cutting attachments are identified for repair or replacement in line with

ELEMENT**PERFORMANCE CRITERIA**

organisational requirements and manufacturer's recommendations

5.3.Chain and other components are removed, cleaned, maintained, adjusted or replaced in line with manufacturer's recommendations

5.4.Tools and equipment are maintained in line with OHS requirements and manufacturer's recommendations

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to select, use and maintain relevant equipment to safely trim and cut felled trees in a range of situations
- Ability to assess the implications related to identified stresses of the tree
- Communication skills sufficient to interact with colleagues and others
- Literacy skills sufficient to review and accurately identify work requirements and to locate, record and report information
- Numeracy skills sufficient to estimate and measure tolerances and minimum diameter, and calculate time to complete tasks
- Problem solving skills sufficient to identify problems, equipment faults and apply appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for trimming and cutting felled trees
- Industry, organisational and site standards, requirements, policies and procedures for trimming and cutting felled trees
- Environmental protection requirements, including the safe disposal of waste material
- Characteristics of trees and types of timber defects that may affect cutting
- Cutting patterns, sequences and techniques
- Chainsaw operation, safety and maintenance procedures
- Risk assessment processes
- Problem identification and resolution strategies and common fault finding

REQUIRED SKILLS AND KNOWLEDGE

techniques

- Types of tools and equipment and procedures for their use, operation and maintenance for trimming and cutting felled trees
- Procedures for reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently trim and cut felled trees and conduct equipment maintenance within industry and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS and environmental, relevant to trimming and cutting felled trees
- following industry and organisational policies and procedures relevant to trimming and cutting felled trees
- effective communication and safe working practices
- planning of trimming and cutting activities in line with site standards and regulations
- trimming and cutting of felled trees in line with job requirements in a range of workplace situations
- equipment maintenance
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Context of and specific resources for assessment

EVIDENCE GUIDE

- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing safety equipment
- first aid equipment
- fire fighting equipment
- communications equipment
- location of other workers
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe workplace practices including required actions relating to forest fire
- awareness of danger zone for kickback
- manual handling including shifting, lifting and carrying
- erection of warning signs
- potential falling objects
- procedures for cutting on slopes

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- Australian Standards
- OHS
- the environment
- equal opportunity
- relevant industry codes of practice

RANGE STATEMENT

Organisational requirements may include:

- award and enterprise agreements
- industrial relations
- confidentiality and privacy
- duty of care
- heritage and traditional land owner issues
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS
- emergency and evacuation procedures
- fire prevention procedures
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)
- access and equity principles and practices
- hardwood trees
- softwood trees

Trees may include:

Environmental protection measures may include:

- action to limit the impact of noise, wind speed and direction, fallen trees, ground slope, ground hazards and obstacles, general forest lean
- action to limit the impact to ground growth, canopy, density of trees

and may relate to:

- soil and water protection
- contingencies for modifying operations during wet or other adverse weather conditions
- the safe disposal of waste material

Job requirements

refer to information and instructions relevant to trimming and cutting operations including:

- size
- length

RANGE STATEMENT

Appropriate personnel may include:

- quantity and grade
- removal status
- supervisors
- clients
- colleagues
- line management

Tools and equipment may include:

- chainsaws
- Personal Protective Equipment (PPE)
- maintenance tools
- fuel and oil containers

and ancillary equipment, which may include:

- hammer
- axe
- wedges
- cant hook or breaking bar
- first aid kit
- fire control equipment
- tool belt
- loggers tape
- warning signs
- chainsaw maintenance kit

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- use of electronic devices

Environmental requirements

may be assessed in relation to:

- ground growth
- ground slope
- ground hazards and obstacles

and may include environmental protection measures to:

- limit the impact of noise, fumes in enclosed spaces, waste, fire, disposal of fuel and oil
- limit the impact on flora, fauna and habitat

Defects may include:

- splits
- falling damage
- fire damage
- infestation

RANGE STATEMENT

- pipe
 - shake
 - twist
 - branch/knot locations
- Stresses** may include:
- tension (fibres being stretched)
 - compression (fibres being squashed)
 - neutral fibres
- Cutting pattern** refers to:
- the best direction or angle for making a cut
- Sequence of cuts** refers to:
- the plan of cuts to optimise time and recovery of logs
- Debris** may include:
- stones
 - rocks
 - loose branches
 - other timber
 - woody material
 - any loose hazards underfoot or in escape path
 - any material underfoot or in the cutting area which may impinge on safe cutting procedures
- Pre start-up checks** may include:
- checking that equipment is suitable for task and has been set up correctly
 - checking that systems are performing accurately
 - checking equipment is operating to optimum performance
- Cutting techniques** may include:
- bridging cuts
 - swinging cuts
 - side bind cuts
 - delimiting
 - boring
 - wedge cuts
 - ripping cuts
- Records** may include:
- quality outcomes; hazards, incident reports, equipment malfunctions and damage
- and may be compiled using a computer-based system or another appropriate organisational communication system to record and report
- Maintenance** must include:
- sharpening
- and may include:
- refuelling

RANGE STATEMENT

- inspection, identification and replacement of bar, chain, drive sprockets
- bar oil checks and top up
- air filter check, clean and replacement
- cleaning of saw body, air intake vents and cooling fans
- fitting spare chain and tension chain

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT2240 Cut material with a pole saw

Modification History

Version	Detail
1	New unit

Unit Descriptor

This unit describes the outcomes required to cut materials at a distance reachable with a mechanical pole saw and to unblock components of machinery.

Application of the Unit

The unit involves operating a pole saw in a saw mill and timber/ply environment.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of endorsement.

Pre-Requisites

Not applicable

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cutting	<p>1.1. Identify as within safe working limits type and quantity of <i>material</i> to be <i>cut</i></p> <p>1.2. Select <i>equipment</i> appropriate to work requirements and check for operational effectiveness in line with manufacturer recommendations</p> <p>1.3. Carry out <i>pre start-up checks</i> on equipment in line with site requirements</p> <p>1.4. Assess pole saw set-up and adjust to suit cutting conditions</p> <p>1.5. Establish and maintain <i>communication</i> with others in line with <i>occupational health and safety (OHS) requirements</i></p>
2. Assess materials	<p>2.1. Assess type and quantity of material to be cut and <i>environmental conditions</i> to plan cutting activities consistent with site procedures and <i>environmental requirements</i></p> <p>2.2. Monitor movement and location of other personnel and modify work in line with OHS regulations, where required</p> <p>2.3. Assess location and stability of materials for conditions likely to affect safety of cutting activities</p> <p>2.4. Identify materials unable to be cut safely and refer them to appropriate personnel</p>
3. Use pole saw to cut and unblock materials	<p>3.1. Operate <i>pole saw</i> to cut materials and unblock machinery components in line with safety regulations, <i>job specifications</i> and <i>workplace procedures</i>, and adjust cutting technique in response to equipment requirements and allowances</p> <p>3.2. Turn motor off before examining any blockages to the pole saw</p> <p>3.3. <i>Clear</i> waste and debris from the site in line with standard operating procedures and environmental requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Record and report cutting processes and equipment faults to appropriate personnel
4. Maintain equipment	4.1.Follow equipment lock-out procedures in line with site procedures 4.2.Check chain for blunt or damaged condition 4.3.Remove, sharpen, maintain, adjust and replace chain and other components in line with manufacturer recommendations 4.4. Deal with chain and other components that need replacing in line with site procedures, manufacturer recommendations and environmental requirements 4.5.Keep pole saw clear of dust, shavings and debris and check it to make sure it meets relevant standards

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills to:
 - use and maintain relevant tools, machinery and equipment
 - efficiently and safely cut materials
- Communication skills to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills to:
 - record and report workplace information
 - maintain documentation
- Numeracy skills to measure, estimate and calculate time required to complete a task
- Problem-solving skills to:
 - identify problems and equipment faults
 - demonstrate appropriate response procedures

Required knowledge

- Applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a pole saw

- Environmental protection requirements, including:
 - safe disposal of waste material
 - minimisation of carbon emissions
 - cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a pole saw, including safety procedures
- Workplace risks and hazards associated with cutting materials with a pole saw
- Procedures for using energy effectively and efficiently
- Cutting procedures for cutting at a distance
- Methods for assessing condition of pole saw chain
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault-finding techniques to unblock materials from machinery
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently operate a pole saw in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable federal, state or territory legislative and regulatory requirements and codes of practice relevant to operating a pole saw
- following organisational policies and procedures relevant to operating a pole saw
- identifying and correct use of personal protective equipment for the use of pole saw
- identifying workplace risks and hazards associated with cutting materials with a pole saw and take appropriate action

- identify limitations
- cutting a range of wood or wood-related products at a distance requiring the use of a pole saw in line with the work plan and within prescribed organisational tolerances
- procedures for pole saw lock-out
- maintaining a pole saw

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory requirements and Australian standards
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Material includes:

- wood
- wood-related products

Cutting must include:

- cutting wood or wood-related products at a distance requiring the use of a pole saw

Equipment must include:

- procedures for pole saw lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine
- pole saws
- specific safety attire
- maintenance tools and equipment

Pre start-up checks are conducted to ensure:

- equipment has been set up correctly
- equipment is operating to optimum

performance

- systems are performing accurately

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening and questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

OHS requirements:

- are to be in line with applicable federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - personal protective equipment (PPE) and clothing
 - safety equipment
 - first aid equipment
 - firefighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - techniques for manual handling, including shifting, lifting and carrying
 - vibration and engine heat issues associated with prolonged use
 - ergonomic requirements relating to issues, such as vibration and engine heat associated with prolonged use

Environmental conditions may include:

- work hazards
- obstacles
- location of blockage
- access to the required area of machinery

Environmental requirements

- legislation

may include:

- organisational policies and procedures
- workplace practices

Pole saw:

- is to include:
 - mechanised saw at the end of a long extension pole from the bottom of the pole
- may also include:
 - manual saws
 - non-mechanised saws

Job specifications include:

- OHS requirements
- environmental requirements
- legislative requirements
- organisational requirements

Workplace procedures may include:

- legal compliance documentation
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements, including waste minimisation and disposal, recycling and re-use guidelines

Clearing may include:

- redirecting materials for energy recovery
- recycling waste materials

Records and reports:

- may include:
 - inspection information
 - storage locations
 - quality outcomes

- hazards
- incidents
- equipment malfunctions
- may be:
 - manual
 - computer-based system
 - other appropriate organisational communication system

Dealing with may include:

- recycling chain and other components that need replacing
- re-using chain and other components that need replacing
- sending chain and other components that need replacing to landfill

Components may include:

- conveyors
- chains
- roller drums
- pulleys

Unit Sector(s)

Common Technical

Competency field

Not applicable

FPICOT2241 Apply wood and timber product knowledge

Modification History

Version	Code and title of equivalent unit of competency
2.0	Title corrected. No other changes
1.0	No equivalent unit

Unit Descriptor

Unit descriptor This unit describes the outcomes required to apply wood and timber product knowledge in the workplace and promote the benefits of wood and timber products to a range of customers and other stakeholders. It involves identifying products and providing accurate information to customers about products.

Application of the Unit

Application of the unit The unit applies in a variety of work settings, including warehousing and logistics and wholesale and retail sales.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit, however there are no specific licensing or certification requirements at the time of publication.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT

Elements describe the essential outcomes of a unit of competency.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- | | |
|---|--|
| <p>1. Develop knowledge of wood and timber products</p> | <p>1.1 Information sources for wood and timber products are identified and evaluated for reliability, validity and currency in line with organisational policies and procedures</p> <p>1.2 Wood and timber product certification bodies, schemes and their roles are researched</p> <p>1.3 Properties of wood and timber are identified</p> <p>1.4 Main features of timber products are identified</p> <p>1.5 Differences between imported wood and timber products and Australian wood and timber products are explored and clarified with relevant personnel</p> |
| <p>2. Relate wood and timber product knowledge to own workplace</p> | <p>2.1 Appropriate work/occupational health and safety (WHS/OHS), environmental and organisational policies and procedures relevant to applying wood and timber product knowledge are identified and followed</p> <p>2.2 Production process is identified and reviewed</p> <p>2.3 Advice is sought from supervisors and colleagues about current wood and timber product issues</p> <p>2.4 Common wood and timber treatment methods, preservatives and exposure hazards are identified and reviewed</p> <p>2.5 Organisation's position within the forest and forest products industry is identified</p> <p>2.6 Timber coatings and finishes are matched to a specific use</p> <p>2.7 Currency of wood and timber product knowledge is maintained</p> |
| <p>3. Promote wood and timber products</p> | <p>3.1 Characteristics of timber are promoted to stakeholders according to organisational procedures</p> |

ELEMENT**PERFORMANCE CRITERIA**

3.2 Information is provided to *stakeholders* about wood and timber products and their respective *advantages* in response to requests and questions and according to organisational procedures

3.3 Advice is given on *appropriate timber(s)* for specific *end uses*

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Communication and interpersonal skills to:
 - interact appropriately with colleagues and others in the workplace
 - source information on wood and timber products
 - communicate the features and characteristics of timber products to stakeholders
- Literacy skills to accurately locate, record and report information
- Problem-solving skills to establish opportunities for access to current information about wood and timber products
- Technical skills to use relevant technology to source information on wood and timber products

Required knowledge

- Organisational and site standards, requirements, policies and procedures relevant to sourcing and providing information on wood and timber products
- Established organisational communication channels and protocols
- Common timber species, their appearance, characteristics, origin and uses
- Life cycle of forests and forest products
- Methods, preservatives and exposure hazards relating to manufactured timber: engineered products, laminated veneer lumber (LVL), medium density fibreboard (MDF), plywood, and particle board
- Key features of a range of manufacturer product literature
- Certification and chain of custody schemes
- Timber grades and grading
- Wood preservatives and relevant regulations
- Problem identification and resolution strategies
- Procedures for recording and reporting workplace information
-

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can develop knowledge of wood and timber products and promote those products in the workplace.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to applying wood and timber product knowledge
- following organisational policies and procedures relevant to applying and communicating wood and timber product knowledge
- knowledge of products applicable to enterprise requirements
- benefits of common wood and timber types for different end uses
- suitable species and product types for a range of wood and timber applications
- ability to provide advice regarding wood and timber products to stakeholders.

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

- Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information sources may include:

- Australian standards
- National Construction Code
- manufacturer and supplier websites and literature
- industry organisation websites
- are to be in line with applicable commonwealth,

Organisational policies and

procedures:

state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- the environment
- relevant industry codes of practice
- organisational and site guidelines relating to developing and applying product knowledge
- policies and procedures relating to own role and responsibility
- procedure manuals
- quality and continuous improvement processes and standards
- recording and reporting requirements

Certification bodies and schemes may include:

- Australian Forestry Standard (AFS)
- Australian standards for forest management and chain of custody
- Forest Stewardship Council (FSC)
- environmental management systems
- Programme for the Endorsement of Forest Certification (PEFC)
- Australian Wood Packaging Certification Scheme

Properties of wood and timber may include

- durability
- density
- sawing orientation
- strength group
- shrinkage
- joint strength
- lyctus susceptibility
- fire rating
- hardness

Main features may include:

- carbon sequestration, capture and storage
- sustainability and renewability
- low energy/emissions
- cost to produce

Timber products may include:

- furniture
- paper products
- packaging
- timber
- wood panel products (plywood, MDF, particleboard)
- sawn timber
- round timber

- treated timber
 - glue laminated timber
 - wood composites
 - biofuels
- Relevant personnel** may include:
- supervisors
 - colleagues
 - industry associations
 - suppliers
- WHS/OHS requirements:**
- are to be in line with commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - safety equipment, including personal protective equipment and clothing
 - first-aid equipment
 - fire-fighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - manual handling, including shifting, lifting and carrying
- Environmental requirements** may include:
- organisational policies and procedures
 - workplace practices
 - sustainability and environmental management requirements, including waste minimisation and disposal, recycling and reuse guidelines
 - energy efficiency measures
- Production process** may include:
- sawmilling
 - preservation
 - panel production
 - glue lamination
 - fabrication (trusses)
- Timber coatings and finishes** may include:
- oils
 - paints
 - stains
 - brush or spray-on preservative
 - weather protection
- Maintaining currency** may include:
- asking appropriate questions of supervisors and managers
 - sourcing information about new wood products to provide to stakeholders

Characteristics may include:

- moisture content
- stability in service
- grade
- colour
- strength to weight ratio
- strength rating
- treated timber
- wood types

Stakeholders may include:

- architects
- builders
- craft workers
- furniture makers
- do-it-yourself (DIY) home handy person
- wood workers

Advantages may include:

- appearance
- certification
- durability
- structural performance and efficiency sustainability:
 - insulation properties
 - environmentally attractive
 - ease of modification
 - thermal performance

Appropriate timber(s) may include:

- hazard level
- wood product type
- sustainability criteria
- timber grading (structural and aesthetic)
- wood species

End uses may include:

- artist works
- craft making
- construction, including framing
- fire rated applications
- flooring
- indoor furniture
- indoor applications, such as doorframe and architraves
- outdoor furniture
- outdoor applications, such as decking, fencing, verandahs, balconies and stairs
- toys

Unit Sector(s)

Timber Merchandising

Timber Manufactured Products

Sawmilling and Processing

Wood Panel Products

Custom Content Section

Not applicable.

FPICOT3201B Hand sharpen knives and blades

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to hand sharpen knives and blades for a variety of machines

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3201A Hand sharpen knives and blades

Application of the Unit

Application of the unit The unit involves hand sharpening knives and blades in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for sharpening	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to hand sharpening knives and blades are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Types of <i>knives and blades</i> to be <i>sharpened</i> are removed from designated machinery</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Sharpening process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Assess condition and set up knives and assemblies	<p>2.1. <i>Cutting performance</i> of knife is assessed for sharpening requirements</p> <p>2.2. <i>Knife holders</i> are cleaned to enterprise standards</p> <p>2.3. Knife holder is assessed for condition and defects are corrected</p> <p>2.4. Jig setting is selected for knife assembly</p> <p>2.5. Knife assembly is separated and reassembled in line with manufacturer recommendations</p>
3. Sharpen knives and blades	<p>3.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>3.2. Knives or blades are cleaned of excess build-up and inspected for <i>defects</i>, with those unable to be</p>

ELEMENT**PERFORMANCE CRITERIA**

- repaired by sharpening replaced and *dealt with* in line with site procedures, manufacturer recommendations and environmental requirements
- 3.3. *Geometry* for knives or blades is selected from manufacturer's instructions
- 3.4. *Manual sharpening equipment* is selected with suitable *attachment* for holding the knife or blade
- 3.5. Sharpening equipment is fed across and into cutting edge to obtain clean cutting edge to conform to geometric requirements without defects and burns
- 3.6. Blade or knife is inspected after sharpening for accuracy, and remaining *burrs* are *honed* to obtain a sharp cutting edge
- 3.7. Sharpening and equipment faults are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; carry out pre-startup checks; efficiently and safely hand sharpen knives and blades
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for hand sharpening knives and blades; record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for hand sharpening knives and blades
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

material, the cleaning of plant, tools and equipment, and the minimisation of carbon emissions

- Organisational and site standards, requirements, policies and procedures for hand sharpening knives and blades
- Environmental risks and hazards
- Characteristics of metal, knives and blades
- Sharpening methods and geometry
- Manual sharpening equipment
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently hand sharpen knives and blades in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to hand sharpening knives and blades
- following organisational policies and procedures relevant to hand sharpening knives and blades
- hand sharpening knives and blades in line with the work order and prescribed organisational

EVIDENCE GUIDE

- requirements
- removing and replacing knives and blades from equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the hand sharpening of knives and blades in designated equipment

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Knives and blades may include:

- saw blades

RANGE STATEMENT

- planer blades
- thickneser blades
- spindle moulder knives
- all other production equipment with knives or blades

Sharpening is to include:

- pitch
- depth of cut
- speed the knife or blade is sharpened at to obtain a sharp edge

Equipment is to include:

- procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

Communication may include:

- manual sharpening equipment
- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Cutting performance

is how sharp the knife or blade is relevant to the material being cut

Knife holders

are the assemblies that house the knives in a cutting head or similar device

Pre-startup checks

are conducted to ensure:

- machine has been set up correctly
- systems are performing accurately
- machine is operating to optimum performance

Defects may include cutting edges with:

- burrs
- burns
- chips
- splits
- dents

RANGE STATEMENT

Dealing with may include:

- recycling knives or blades unable to be repaired by sharpening
- sending knives or blades unable to be repaired by sharpening to landfill

Geometry

is the pitch and angle that a knife or blade is sharpened at, allowing for the device that the knife or blade is in and the material it will be cutting

Manual sharpening equipment may include:

- files (round, triangular, square and flat)
- honing tools
- saw sets

Attachments may include:

- blade holders with or without clamps
- saw vices

Burrs

are fine raised flaps of metal curling backwards as a result of the sharpening process

Honing:

- involves using a flat emery stone to remove burrs and to achieve a crisp sharp cutting edge

Records and reports may include:

- knife or blade type and size
- inspection and work outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3202B Navigate in remote or trackless areas

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to navigate in untracked, remote areas in situations where difficult environmental conditions and poor visibility are likely to occur. The unit includes interpretation and use of maps and other navigation aids

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3202A Navigate in remote or trackless areas

Application of the Unit

Application of the unit

The unit involves navigating in a remote or trackless area in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for navigation	<p>1.1.Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to navigating in a remote or trackless areas are identified and followed</p> <p>1.2.<i>Information</i> is gathered and <i>relevant factors</i> are identified and checked with <i>appropriate personnel</i></p> <p>1.3.Suitable <i>maps, equipment</i> and <i>navigation aids</i> are selected and checked for accuracy, currency and operational effectiveness in line with manufacturer recommendations</p> <p>1.4.Faults or errors in maps and equipment are detected and corrected</p> <p>1.5.<i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Plan the route	<p>2.1.Route is planned in line with assignment instructions and OHS requirements</p> <p>2.2.Maps are examined to identify relevant <i>symbols, information, navigation data and environmental requirements</i></p> <p>2.3.Accurate grid and magnetic bearings are calculated using maps and equipment in line with assignment instructions</p> <p>2.4.Emergency or contingency exit routes are planned</p>

ELEMENT	PERFORMANCE CRITERIA
3. Conduct navigation	<p>and other <i>risks</i> are planned for</p> <p>2.5. <i>Limitations</i> in planning are specified and assistance is sought in line with organisational requirements</p> <p>3.1. Navigation is undertaken in line with planned route and schedule</p> <p>3.2. Maps are correctly orientated to <i>surroundings</i> in line with planned route</p> <p>3.3. Equipment and navigation aids are used in line with manufacturer recommendations</p> <p>3.4. Alternative routes are navigated to bypass <i>obstacles</i> and improve efficiency of route or course</p> <p>3.5. Impact on the environment as a result of navigation is minimised</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for navigating in remote or trackless areas; record and report workplace information; maintain documentation
- Numeracy skills sufficient to calculate bearings using maps and compass correctly
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures; interpret maps, charts, distances, grid references, relevant symbols, map meaning and line types; estimate resource and equipment requirements; solve problems and bypass obstacles; locate own position on a map

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for navigating in a remote or trackless area
- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition

REQUIRED SKILLS AND KNOWLEDGE

on completion of activity

- Organisational and site standards, requirements, policies and procedures for navigating in a remote or trackless areas
- Environmental risks and hazards
- Types of maps and charts, and their uses
- Representation of topographic features on maps and plans
- Common scales used on maps and plans
- Features and use of a compass and factors that affect its accuracy
- Advantages and disadvantages of different map and chart types and sources of error
- Techniques for estimating distance travelled within a particular activity context
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently navigate in a remote or trackless area, demonstrating the correct orientation and use of maps, plans and compass

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to navigating in a remote or

EVIDENCE GUIDE

trackless area

- following organisational policies and procedures relevant to navigating in a remote or trackless area
- selecting, interpreting, and applying maps and other relevant information in written, diagrammatic and verbal form
- using maps, compass and navigation aids to navigate in remote or trackless area, confirming factors affecting the use of navigation equipment
- planning and conducting an efficient navigation, effectively bypassing obstacles within designated timeframes

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements may include:**
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

- Information may relate to:**
- local inhabitants
 - type of terrain or features of the route
 - access and exit routes
 - natural protection or shelter
 - land management and legislative requirements
 - guide books

RANGE STATEMENT

- Relevant factors** may relate to:
- types of terrain and gradient
 - weather conditions
 - obstacles
 - hazards and access to required resources and facilities
 - distance
 - estimated travelling time
 - magnetic bearings
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
- Maps** may include:
- cadastral and topographic maps
 - charts
 - guide books
 - aerial photographs
 - sketches and cave maps
 - diagrams
- Equipment** may include:
- compass
 - track and survey markers
 - beacons
 - personal protective equipment and clothing
 - global positioning system (GPS) units
- Navigation aids** may include:
- track and creek junctions and crossings
 - survey markers
 - beacons
 - track markers
 - cairns
 - paths
 - signs
 - arrows
 - compass
 - man-made objects or features
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language

RANGE STATEMENT

- Symbols and information** may include:
- use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - grid lines and numbers
 - contour lines
 - magnetic variation
 - scale
 - map legend
 - topographic features
 - markers and beacons
 - water depth
- Navigation data** may include:
- grid reference points
 - grid and magnetic bearings
 - distances
 - estimated travelling times
 - height gain and loss
 - gradient
 - identifiable features
 - exit routes
- Risks** may include:
- weather
 - obstacles
 - availability of resources, such as:
 - water
 - camp sites
 - rest stops
 - type of terrain
 - access and exit routes
 - natural protection or shelter
- Limitations** may relate to:
- job role and responsibilities
 - own competency level
 - industry requirements
 - own understanding of risk identification processes
 - own interpretation of maps
 - legislation
 - regulations and procedures
 - legal responsibilities
 - OHS and environmental requirements
- Surroundings** may include:
- ground/terrain
 - bodies of water

RANGE STATEMENT

Obstacles may include:

- beacons and markers
- natural formations
- landmarks
- man-made features
- thick vegetation
- drops and climbs
- marshes and bogs
- fog
- rivers
- lakes and dams
- tides
- hazards, such as rocks

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3203B Weigh loads

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to check, weigh and record vehicle loads. This unit also includes accurately directing vehicles for loading and unloading material

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3203A Weigh loads

Application of the Unit

Application of the unit The unit involves weighing loads in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------------|--|
| 1. Prepare for weighing | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to weighing loads are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Material acceptable for despatch or delivery is identified and checked with work order</p> <p>1.4. Vehicles delivering or collecting loads are identified, and documents and loads are checked</p> <p>1.5. Load height and stability are checked to make sure they follow regulatory and site requirements</p> <p>1.6. Weighing operations are assessed and checked for safe working conditions, and planned in line with site procedures and environmental requirements</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Check, weigh and record loads | <p>2.1. Weighing operations are conducted in line with work order, and environmental and OHS requirements</p> <p>2.2. Gross and vehicle tare weights are identified or <i>measured</i> in line with regulatory and site procedures</p> <p>2.3. Net weight is correctly calculated and recorded with other required delivery and despatch information</p> <p>2.4. Confirmation of delivery and despatch records is obtained from driver</p> <p>2.5. <i>Documentation</i> is accurately recorded and maintained in line with workplace procedures</p> |
| 3. Direct vehicles for | <p>3.1. Loading and unloading information and instructions</p> |

ELEMENT	PERFORMANCE CRITERIA
loading and unloading	<p>are identified and checked with work order</p> <p>3.2.Potential and existing risks and hazards associated with directing vehicles are identified and controlled</p> <p>3.3.Vehicles are clearly and accurately directed to loading and unloading areas</p> <p>3.4.Despatch and delivery personnel are promptly notified of deliveries requiring loading and unloading</p> <p>3.5.Vehicle movements are monitored to identify presence on site and attend as required to driver needs</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment; safely, efficiently and accurately weigh loads
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for producing weighing loads; locate, interpret and apply workplace information and instructions; record and report workplace information; maintain documentation
- Numeracy skills sufficient to select appropriate mathematical processes to calculate weight and measure dimensions
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for weighing loads
- Environmental protection requirements, including the safe disposal of waste material, and the minimisation of carbon emissions
- Organisational and site standards, requirements, policies and procedures for weighing loads
- Environmental risks and hazards

REQUIRED SKILLS AND KNOWLEDGE

- Site compliance requirements regarding vehicle load height, stability and weight
- Functions and operational principles of weighbridges
- Functions of truck scales
- Site layout, including loading and unloading areas
- Full range of material received or supplied
- Relevant site and external packing regulations
- Established communication channels and protocols
- Problem identification and resolution, strategies and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for calculating load weight and measuring dimensions
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can accurately check, weigh and record vehicle loads in line with applicable regulatory, industry and site requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to weighing loads
- following organisational policies and procedures relevant to weighing loads
- applying mathematical procedures to calculate load weight and measure dimensions
- safely and efficiently implementing the correct procedures to weigh loads

EVIDENCE GUIDE

Context of and specific resources for assessment

- clearly and accurately recording and maintaining delivery and despatch documentation
- safely and effectively directing and monitoring vehicles for loading and unloading
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations,

RANGE STATEMENT

certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- details of loads to be weighed, including:
 - companies
 - personnel
 - vehicles delivering or collecting material

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- supervisors
- clients
- colleagues

Organisational requirements may include:

Work order is to include:

Appropriate personnel may include:

RANGE STATEMENT

- Communication** may include:
- line managers
 - verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Measuring** may include:
- weighbridge
 - truck scales
- Documentation** may include:
- weighbridge dockets
 - order dockets
 - tally sheets
 - delivery records

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3204B Prepare and interpret sketches and drawings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit specifies the outcomes required to identify, select and interpret a sketch or drawing. The unit includes interpreting a range of sketch and drawing details, and preparing sketches and drawings using dimensions, tolerances and notes following industry and site conventions

This unit replaces FPICOT3204A Prepare and interpret sketches and drawings

Application of the Unit

Application of the unit This unit involves preparing and interpreting sketches and drawings in an office environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Identify and select correct sketch or drawing | 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to preparing and interpreting <i>sketches and drawings</i> are identified and followed
1.2. Sketches or drawings are <i>obtained</i> and confirmed in line with job requirements and site procedures
1.3. Notes and sketches or drawings are interpreted, <i>checked</i> and validated for correct application and omissions are determined in line with site procedures
1.4. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Interpret sketch or drawing detail | 2.1. Sketches or drawing <i>features</i> are accurately identified and <i>interpreted</i> to provide a three-dimensional picture of components, assemblies or structures
2.2. Sketches or drawings are used to orientate and fit components or assemblies as required
2.3. Dimensions and tolerances are interpreted to correctly measure, select, mark or set up items or equipment
2.4. Areas of insufficient detail are identified and reported in line with site procedures |
| 3. Prepare sketch or drawing | 3.1. Items to be drawn are identified to ensure clear communication of requirements in line with site procedures
3.2. Drawing views are selected to present required information with minimal drawing complexity in line |

ELEMENT**PERFORMANCE CRITERIA**

- with site standards
- 3.3. Sketches or drawings are correctly and clearly *drawn* in line with customer expectations, site and industry conventions and standards
- 3.4. Sketch and drawing preparation and interpretation activities are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment; interpret the detail and features of sketches or drawings; use sketches and drawings to measure, select, mark or set up production requirements
- Communication skills sufficient to interpret and convey information in written, sketch or verbal form; use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; identify omissions and areas of insufficient detail; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for preparing and interpreting sketches and drawings
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for preparing and interpreting sketches and drawings
- Environmental risks and hazards
- Problem identification and resolution strategies, including methods for identifying omissions or areas of insufficient detail in sketches and drawings
- Types of tools and equipment, and procedures for their safe use and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- Drawing systems and conventions, including computerised design where appropriate
- Standard industry and site conventions for views, notes, dimensions and tolerances
- Types of drawings and sketches and dimensioning systems
- Procedures for recording, reporting and maintaining workplace records and information
- Established communication channels and protocols

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently identify, select and interpret sketches and drawings following industry and site conventions

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to preparing and interpreting sketches and drawings
- following organisational policies and procedures relevant to preparing and interpreting sketches and drawings
- communicating with others in the work area to convey information relating to sketching and drawing detail and items to be drawn
- interpreting sketch and drawing details to determine material requirements and providing a three-dimensional picture of components, assemblies or structures
- determining areas of insufficient detail or omissions from sketch and drawing detail

EVIDENCE GUIDE

- Context of and specific resources for assessment**
- preparing a sketch or drawing that correctly represents intended items and follows industry and site conventions
 - Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Sketches and drawings may:

- be computer-assisted, freehand or completed with simple drawing instruments
- present one, two or three projections
- involve timber, assemblies, structures and hardware items within the individual's field of work and with which the individual is familiar
- be used as a basis for selecting, preparing or assembling components or products

Obtained may be from:

- order documentation
- file systems
- local sources

Checked may include:

- pictorially checking to present all necessary items

RANGE STATEMENT

Communication may relate to:

- drawing version
- dates
- application of the drawing or sketch
- omissions
- areas of insufficient information

Features may include:

- individual components or items
- base lines
- datum points
- views and projections
- dimensions and tolerances
- instructions and notes
- elementary drawing
- product and production symbols

Interpreted

may be for the purposes of determining:

- material requirements
- areas of insufficient detail or omissions
- item, component, assembly and structure

Drawn may include:

- views, placement and projection, correct representation of items
- use of clear lines, dimensions, and tolerances
- notes to fully define requirements

Records and reports may include:

- sketches and drawings
- tally sheets
- quality sheets and forms
- production sheets and downtime sheets

and relate to:

- production details
- computer problems
- interruptions to production

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3205B Dress boards using multi-headed machines

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and conduct a board dressing process using multi-headed machines. It requires an ability to plan and evaluate dressing conditions and processes and to set, adjust and maintain cutters and equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3205A Dress boards using multi-headed machines

Application of the Unit

Application of the unit

The unit involves dressing boards using multi-headed machines in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan dressing process	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to dressing boards using multi-headed machines are identified and followed</p> <p>1.2. Dressed <i>board requirements</i> are identified and selected from work orders, schedules and site procedures in line with job requirements</p> <p>1.3. Available sawn <i>boards are assessed</i> and material removal rates estimated in line with site procedures</p> <p>1.4. <i>Equipment</i> is selected, checked, adjusted where necessary and started in line with manufacturer's recommendations and site procedures</p> <p>1.5. Volume <i>recovery</i> and efficient use of equipment are maximised through equipment use and workplace practices, in line with site standards</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set cutters and dress boards	<p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Cutters, feeders, guides and conveyors are selected, checked, prepared and set to suit required dressed product dimensions and available sawn material</p> <p>2.3. Dressing operation and processing sizes are planned</p>

ELEMENT	PERFORMANCE CRITERIA
	in line with site procedures
	2.4. Trial boards are dressed, by operating dressing equipment checked and equipment adjusted to correct faults in line with site standards
	2.5. Trial boards that achieve the desired dimensions within tolerances are added to the process
	2.6. Trial boards that do not achieve the desired dimensions within tolerances are disposed of in line with site procedures and environmental requirements
	2.7. Dressing conditions are commenced, regularly assessed and adjusted to ensure product quality and sizing, continuity of supply and processing in line with site standards
	2.8. Dressing feed rate and finish are evaluated to determine board size, material removal, timber species and condition in line with site standards
	2.9. Sub-standard boards are disposed of in line with site procedures and environmental requirements
	2.10. Records and reports are accurately completed, processed and maintained in line with workplace procedures
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. Cutter is checked for blunt or damaged condition in line with site procedures
	3.3. Blunt or damaged cutter is identified and dealt with in line with site procedures, manufacturer's recommendations and environmental requirements
	3.4. Machine area is kept clear of dust and debris in line with OHS and environmental requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant cutters, tools, machinery and equipment, including to carry out lock-out procedures; efficiently and safely

REQUIRED SKILLS AND KNOWLEDGE

- plan, set and operate materials and equipment for a board dressing operation
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
 - Literacy skills sufficient to record and report workplace information; maintain documentation
 - Numeracy skills sufficient to apply mathematical processes to measure finished dimensions and profiles with accuracy appropriate to tolerances
 - Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for dressing boards using multi-headed machines
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for dressing boards using multi-headed machines
- Environmental risks and hazards
- Criteria for recycling and re-using trial boards that do not achieve the desired dimensions within tolerances/sub-standard boards
- Using energy effectively and efficiently
- Types of cutters, tools and equipment, and procedures for their safe use and maintenance
- Typical timber defects and dressing problems which require action to be taken
- Industry standard cross section and length dimensions, profiles, tolerances, terminology and their application
- Dressing techniques and material removal rates and quantities relevant to available equipment
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently dress boards, and set cutters and maintain equipment in line with site procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to dressing boards using multi-headed machines
- following organisational policies and procedures relevant to dressing boards using multi-headed machines
- planning for, evaluating and maintaining board dressing processes and conditions
- accurately setting, adjusting, operating and maintaining cutters and equipment to suit required dimensions, cutting sequence, feed rates and finish

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package

EVIDENCE GUIDE

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth,

RANGE STATEMENT

state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards

RANGE STATEMENT

- recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Board requirements** may relate to:
- profile
 - cross section dimensions
 - lengths and quantities
 - selection
 - ordering of suitable sawn timber sizes
- Boards assessed** may include:
- species
 - size
 - defects
 - moisture content
 - sawn finish
 - type of preservative treatment
- Equipment** may include:
- single or multi-headed machines
 - machines cutting on one side of board only
 - machines cutting two or more sides of board simultaneously
 - machines incorporating grooving or splitting saws
- Recovery:**
- is the volume of timber dressed from a resource compared to the volume of that resource
 - is expressed as a percentage - $\text{sawn timber volume} / \text{initial log volume} \times 100$
 - maximises the value of the resource
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Pre-startup checks** are conducted to ensure:
- machine has been set up correctly

RANGE STATEMENT

- cutters are installed accurately
- machine is operating to optimum performance

Trial boards

are test pieces to trial the setting for the purpose of achieving the desired dimensions within tolerances

Disposing of may include:

- recycling trial boards that do not achieve the desired dimensions within tolerances/sub-standard boards
- re-using trial boards that do not achieve the desired dimensions within tolerances/sub-standard boards
- redirecting trial boards that do not achieve the desired dimensions within tolerances/sub-standard boards for energy recovery

Dressing conditions may relate to:

- feed rate and finish
- board size
- material removal
- timber species and condition
- cross section dimensions and profiles
- adjustments to maintain accurate sizing

Feed rates are to include:

- rate of speed the material is passed through the machine affecting the sharpness of the cutters
- finish of the material
- production output

Records and reports may include:

- tally sheets
- quality sheets and forms
- production sheets and downtime sheets

and may relate to:

- production details
- maintenance details
- breakdowns or equipment faults
- computer problems
- interruptions to production

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

RANGE STATEMENT**Cutter** may include:

- jointing cutter
- saw and/or head

Dealing with may include:

- repairing or sending for repair blunt or damaged cutters
- recycling cutters that cannot be repaired
- sending cutters to landfill

Unit Sector(s)

Not Applicable

Competency field**Competency field**

Common Technical

FPICOT3206B Cut material using high speed optimiser

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and cut material to differing lengths and angles using computer programmable optimising equipment. It requires the ability to select and load programs and cutting sequences, assess problems and determine appropriate responses

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3206A Cut material using high speed optimiser

Application of the Unit

Application of the unit

The unit involves cutting material using a high speed optimiser in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cutting	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to cutting material using high speed optimiser are identified and followed</p> <p>1.2. <i>Job requirements</i> are obtained from work order or computer download in line with site procedures</p> <p>1.3. <i>Materials</i> suitable for cutting to length and angles are obtained from pre-selected order or identified from available stock</p> <p>1.4. <i>Program requirements</i> are selected and loaded, and machine cycle is checked in line with site procedures</p> <p>1.5. Material cutting patterns and saw setup sequences are identified to enable loading of boards for cutting</p> <p>1.6. <i>Cutting equipment</i> is checked, adjustments made where necessary, and started in line with manufacturer recommendations and site procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Operate programmed machinery	<p>2.1. Materials are loaded and machinery is operated in line with planned cutting sequence, specifications and OHS requirements</p> <p>2.2. First board cut after setup is checked for length and angle to site or order tolerances, and setup is adjusted</p>

ELEMENT	PERFORMANCE CRITERIA
	as required
	2.3. Equipment lock-out procedures are applied in line with OHS requirements and site procedures
	2.4. Off-cuts and rejected boards are identified, segregated and <i>disposed of</i> in line with site procedures and environmental requirements
	2.5. <i>Problems</i> are identified, assessed and resolved or promptly reported in line with site procedures
3. Monitor and adjust processing	3.1. Processing is regularly <i>monitored</i> and minor problems are resolved in line with OHS requirements, site procedures and tolerances
	3.2. <i>Equipment is maintained</i> in line with OHS requirements, site procedures and manufacturer recommendations
	3.3. Major problems and equipment faults are promptly reported in line with site procedures
	3.4. Work area is regularly cleared of off-cuts and sawdust in line with site standards, and environmental and OHS requirements
	3.5. Production and quality <i>records and reports</i> are processed in line with site procedures and organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; load and run machinery programs in line with cutting requirements and specifications; visually assess a variety of board samples; safely carry out minor equipment maintenance, including removing and replacing saw blades
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults;

REQUIRED SKILLS AND KNOWLEDGE

demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards and codes of practice relevant to the full range of processes for cutting material using high speed optimisers
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for cutting material using high speed optimisers
- Environmental risks and hazards
- Criteria for recycling and re-using off-cuts and reject boards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Cutting sequences and patterns
- Standard cross sections, length dimensions and tolerances
- Basic principles governing operation of computer-programmed equipment, including lock-out procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently prepare and undertake cutting processes using computer programmable high speed optimising equipment, and resolve problems and faults in line with site procedures

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to cutting material using high speed optimiser
- following organisational policies and procedures relevant to cutting material using high speed optimiser
- preparing optimising machinery for cutting, including selecting and loading programs
- operating programmed machinery, including maintaining equipment and cutters, and assessing and resolving problems

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related

EVIDENCE GUIDE

conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and

RANGE STATEMENT

- substances
- manual handling including shifting, lifting and carrying
- Environmental requirements may include:**
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Job requirements may include:**
- required quantities
 - sizes
 - lengths
 - angles
 - timber cross sections to be finger jointed

RANGE STATEMENT

- finger joint profiles
 - required/acceptable cleat lengths
 - finished product grades
 - quantities to be produced
 - changeover times
- Materials** may include:
- all products handled by the enterprise
 - timber types, including laminated veneer
 - plywood
 - chipboard
 - MDF
 - dressed timber
 - preservative treated and finger jointed
 - end condition
 - position and size of knots and other faults
 - industry and site standards for allowable wane
 - applicable grading standards
 - visual assessment for timber species and characteristics
- Program requirements** may be selected from a range of available programs or a computer download, identifying and reporting the need for new programs
- Cutting equipment** may include:
- computer-controlled docking
 - optimising and trimming saws to which boards are mechanically fed
 - single or multiple saw positions
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Disposing of** may include:
- recycling off-cuts and reject boards
 - re-using off-cuts and reject boards
 - redirecting off-cuts and reject boards for energy recovery
- Problems** may be minor or major and relate to:

RANGE STATEMENT

- equipment and machinery faults and malfunctions
- programming
- suitability of materials
- loading of programs
- machine cycles
- material cutting patterns
- saw setup sequences
- loading of boards for cutting
- quality of product
- interruptions to production schedule
- processing faults

Monitored may include:

- regular checking dimensions and finish of cut materials
- feed systems
- material flow
- equipment function
- clearance of off-cuts and sawdust around saw

Equipment maintenance may include:

- recognising characteristics of blunt and damaged saws
- removing and replacing saw blades
- reporting equipment faults

Faults may include:

- blunt or damaged cutters
- inadequate supply of materials
- disruption to continuity of flow
- sub-optimal production rate and finish

Records and reports may include:

- equipment logs
- tally sheets
- quality sheets and forms
- production sheets and downtime sheets

and may relate to:

- production details
- maintenance details
- breakdowns or equipment faults
- computer problems
- interruptions to production

and may be:

- manual
- a computer-based system

RANGE STATEMENT

- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3207B Set up, operate and maintain finger jointing operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to set up, operate and maintain a finger jointing operation. The unit includes planning production parameters, maintaining cutters and other equipment, and resolving problems

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3207A Set up, operate and maintain finger jointing operations

Application of the Unit

Application of the unit The unit involves setting up, operating and maintaining finger jointing operations in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------|---|
| 1. Plan production parameters | <p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to setting up, operating and maintaining finger jointing operations are identified and followed</p> <p>1.2. <i>Finger jointing requirements</i> are monitored in line with work orders and site procedures</p> <p>1.3. <i>Schedules</i> are developed and communicated to <i>relevant personnel</i></p> <p>1.4. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Set up jointing operation | <p>2.1. <i>Equipment</i> is checked and adjusted where necessary, and started in line with manufacturer recommendations</p> <p>2.2. Cutters are selected, checked and prepared to suit finger profile and timber cross section in line with site procedures</p> <p>2.3. Trial joints are cut and finger profiles checked in line with site procedures</p> <p>2.4. Trial joints that achieve the desired outcomes are added to the process</p> <p>2.5. Trial boards that do not achieve the desired outcomes are <i>disposed of</i> in line with site procedures</p> |

ELEMENT**PERFORMANCE CRITERIA**

- and environmental requirements
- 2.6. Jointing operation is *prepared* to suit finger profile, timber cross section characteristics and glue requirements
- 2.7. Jointing process is commenced in line with site standards and procedures, and OHS requirements
- 2.8. Trial cleats are machined, joined and tested and *problems* resolved in line with site procedures
- 2.9. Sub-standard joints are disposed of in line with site procedures and environmental requirements
3. Maintain and complete jointing process
- 3.1. Equipment lock-out procedures are applied in line with OHS legislation and site procedures
- 3.2. Routine maintenance of finger jointing equipment is planned and conducted in line with OHS requirements and site procedures
- 3.3. Processing and equipment *faults* are recognised and resolved in line with site procedures
- 3.4. Assistance is provided to maintenance personnel to identify equipment faults and resolve problems in line with site procedures
- 3.5. Finger jointing operations are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; safely carry out simple grinding and sharpening procedures on cutters; plan and set up finger jointing equipment
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults;

REQUIRED SKILLS AND KNOWLEDGE

demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for setting up, operating and maintaining finger jointing operations
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for setting up, operating and maintaining finger jointing operations
- Environmental risks and hazards
- Criteria for recycling and re-using trial boards that do not achieve the desired outcomes/sub-standard joints
- Equipment lock-out procedures
- Methods used to monitor and schedule production
- Industry standard cross sections, strength and tolerances
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan, set up and maintain finger jointing operations and maintain equipment in line with site procedures

Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the

EVIDENCE GUIDE

competency in this unit

requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to setting up, operating and maintaining finger jointing operations
- following organisational policies and procedures relevant to setting up, operating and maintaining finger jointing operations
- planning production parameters, including developing and disseminating schedules
- setting up, operating and maintaining a finger jointing operation, including maintaining equipment and cutters and resolving problems

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of

EVIDENCE GUIDE

process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances

RANGE STATEMENT

- Environmental requirements may include:**
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Finger jointing requirements may include:**
- cross sections
 - grades and quantities of timber requiring work
 - order requirements, including cross sections and end use
- Schedules may include:**
- timber cross sections to be finger jointed
 - finger joint profiles

RANGE STATEMENT

- required and acceptable cleat lengths
 - finished product grades
 - quantities to be produced
 - changeover times
- Relevant personnel** may include:
- docking area personnel
 - finger jointing section personnel
 - further processing area personnel
 - material handling personnel
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Equipment** may include:
- finger jointing machine stations and equipment
 - conveyors
 - guides
 - cutters
 - glue spreader
- Disposing of** may include:
- recycling trial boards that do not achieve the desired outcomes/sub-standard joints
 - re-using trial boards that do not achieve the desired outcomes/sub-standard joints
 - redirecting trial boards that do not achieve the desired outcomes/sub-standard joints for energy recovery
- Prepared** may include:
- setting feed rates
 - setting guides and conveyors
 - setting glue spreader
 - curing controls to apply even coating to joint
- Problems** may relate to:
- equipment faults and malfunctions
 - glue mix, curing and application
 - loading of cleats and shooks
 - quality of product
 - machine settings

RANGE STATEMENT

Faults may include:

- blunt or damaged cutters
- inadequate supply of materials
- disruption to continuity of flow
- sub-optimal production rate and finish

Records and reports may relate to:

- equipment logs
- tally sheets
- quality sheets and forms
- production sheets and downtime sheets

and may relate to:

- production details
- maintenance details
- breakdowns or equipment faults
- computer problems
- interruptions to production

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3208B Test strength of joints

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to collect samples and prepare, test and report on the strength of joints. The unit includes interpreting testing procedure results for use in identifying production problems and identifying necessary changes to processes

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3208A Test strength of joints

Application of the Unit

Application of the unit

The unit involves testing strength of joints in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for testing	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to testing the strength of <i>joints</i> are identified and followed</p> <p>1.2. <i>Test</i> specifications and equipment are identified, obtained and <i>checked</i> in line with work orders, site standards and procedures</p> <p>1.3. Test samples are collected, <i>prepared</i> and recorded in line with quality assurance procedures</p> <p>1.4. Potential <i>problems</i> are identified and resolved in line with site procedures</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Test samples	<p>2.1. Samples are tested in line with industry and site procedures</p> <p>2.2. Test results are obtained and interpreted in line with industry and site procedures</p> <p>2.3. Test reports are completed in line with site procedures</p> <p>2.4. Samples are stored in line with customer, test authority and site requirements</p>
3. Complete testing	<p>3.1. Test results are reported and communicated in line with site standards</p>

ELEMENT**PERFORMANCE CRITERIA**

- 3.2. Potential faulty material is *identified* and *controlled* in conjunction with relevant personnel
- 3.3. Identified faults are reported and used to assist identification of production problems
- 3.4. Test sampling process is modified in response to identified problems and production changes
- 3.5. Testing outcomes are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely collect and test samples; operate testing equipment
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to apply mathematical and estimation processes
- Problem solving skills sufficient to identify problems and faults in production processes; demonstrate appropriate response procedures; apply test results to assist production efficiency

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for testing strength of joints
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for testing strength of joints
- Environmental risks and hazards
- Criteria for recycling and re-using faulty material
- Types of testing equipment and procedures for their safe use and maintenance
- Industry and enterprise standard tests and strength specifications

REQUIRED SKILLS AND KNOWLEDGE

- Adhesives and nailed systems
- Typical production problems and resulting joint characteristics
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently test the strength of joints in line with site standards and procedures, and strength specifications

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to testing strength of joints
- following organisational policies and procedures relevant to testing strength of joints
- preparing for testing, including sample collection and identifying any potential problems likely to affect test results

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than

EVIDENCE GUIDE

confirmatory questions, will usually be conducted in an off-site context

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:**Legislative requirements:**

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

- legal
- organisational and site guidelines

RANGE STATEMENT

may include:

- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Joints may be:

- glued
- formed with nail plates

Test may include:

- bending test
- wet or dry cleavage chisel test
- block shear test
- nail plate pull out test

Checked may relate to:

- appropriateness and accuracy of equipment
- test specifications, locations and methods

Prepared relates to:

- preparing test sample without adversely affecting sample quality

Problems may include:

- situations likely to affect test results and production processes
- test accuracy
- sample quality
- faulty material
- defects

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

RANGE STATEMENT

Identified may be:

indicated by:

- failed test
- test variations
- disposing of faulty material by:
 - recycling
 - re-using
 - redirecting for energy recovery

Controlled may include:

Records and reports may include:

- tally sheets
- quality sheets and forms
- production sheets and downtime sheets

and may relate to:

- production details
- maintenance details
- breakdowns or equipment faults
- computer problems
- interruptions to production

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3209B Set up, operate and maintain end matching operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to set up, operate and maintain timber end matching operations. The unit includes planning production parameters and maintaining equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIC3209A Set up, operate and maintain end matching operations

Application of the Unit

Application of the unit The unit involves setting up, operating and maintaining end matching operations in a forest factory environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan production parameters	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to setting up, operating and maintaining <i>end matching</i> operations are identified and followed</p> <p>1.2. Work order is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Cross sections, grades and quantities of timber requiring rework are monitored</p> <p>1.4. Order requirements including cross sections and end use are monitored</p> <p>1.5. <i>Schedules</i> are developed for end matching operations and details are communicated to relevant personnel</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set up end matching operation	<p>2.1. <i>Equipment checks</i> and pre-startup checks are carried out on all end matching processes in line with manufacturer recommendations</p> <p>2.2. Suitable personal protective equipment and clothing are selected, used and maintained</p> <p>2.3. Potential and existing risks and hazards in the work area are identified and controlled</p>

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|----------------------------------|--|
| 3. Maintain end matching process | <p>2.4. Trial joints are cut, end profiles checked, and trial boards joined and tested in line with site procedures</p> <p>2.5. Trial joints that achieve the desired outcomes are added to the process</p> <p>2.6. Trial joints that do not achieve the desired outcomes are <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.7. Faults in end matching operations are identified and adjustments made as required to maintain workflow</p> <p>2.8. Sub-standard joints are disposed of in line with site procedures and environmental requirements</p> <p>3.1. End matching production is monitored and maintained in line with site procedures</p> <p>3.2. Routine <i>maintenance</i> of end matching equipment is planned and conducted in line with maintenance schedules and manufacturer recommendations</p> <p>3.3. Equipment faults are recognised through monitoring equipment operation and finished product, and are corrected or repaired when within own role and competence to do so</p> <p>3.4. Assistance is sought as required to identify equipment faults and resolve problems</p> <p>3.5. Production and workplace records are completed and maintained in line with site procedures</p> |
|----------------------------------|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely perform end matching operations; maintain board production at optimum rate and finish quality
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation; locate, interpret and apply relevant information and specifications in written, diagrammatic or verbal form; interpret technical or grammatical

REQUIRED SKILLS AND KNOWLEDGE

information; apply common industry terminology

- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for setting up, operating and maintaining end matching operations
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for setting up, operating and maintaining end matching operations
- Environmental risks and hazards
- Procedures for recycling and re-using trial joints that do not achieve the desired outcomes/sub-standard joints
- Methods to monitor and schedule end matching production
- Industry cross sections and tolerances
- Operational principles and limitations of end matching equipment
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and develop production schedules, set up and maintain equipment, and monitor end matching

EVIDENCE GUIDE

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>operations to produce finished timber products</p> <p>The evidence required to demonstrate competency in this unit must be relevant to, and satisfy all of the requirements of the elements of this unit and include demonstration of:</p>
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to setting up, operating and maintaining end matching operations • following organisational policies and procedures relevant to setting up, operating and maintaining end matching operations • planning production parameters, including developing and disseminating schedules • setting up, operating and maintaining end matching operations, including maintaining equipment and cutters, and resolving problems
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills • Assessment methods must confirm the ability to

EVIDENCE GUIDE

access and correctly interpret and apply the required knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment

RANGE STATEMENT

- hazard and risk control
- fatigue management
- safe forest practices, including required actions relating to forest fire
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

End matching may include:

- timber
- butt joints
- structural joints
- hardware

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- line management

Schedules may include:

- timber cross sections to be end matched
- end matching profiles
- finished product grades
- quantities to be produced
- changeover times

and may be communicated to:

- docking area
- end matching section
- material handling personnel

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Equipment checks may include:

- checking and installing cutters
- setting feed rates to suit end profile
- timber cross section and characteristics
- setting guides and conveyers to suit timber cross section

Disposing of may include:

- recycling trial joints that do not achieve the desired outcomes/sub-standard joints
- re-using trial joints that do not achieve the desired outcomes/sub-standard joints
- redirecting trial joints that do not achieve the desired outcomes/sub-standard joints for energy recovery

Maintenance of cutters may

- grinding

RANGE STATEMENT

include inspecting:

- sharpening
- set adjustment

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3210B Sharpen cutting tools

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to verify cutting tool dimensions, select and set up grinder and attachments, and sharpen cutting tools, including cutters, profile cutters, routers and other rotary cutting tools

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3210A Sharpen cutting tools

Application of the Unit

Application of the unit The unit involves sharpening cutting tools in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Determine required cutting tool dimensions | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to sharpening <i>cutting tools</i> are identified and followed</p> <p>1.2. Work order is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Site documentation and drawings are obtained and reviewed to verify <i>cutting tool dimensions</i></p> <p>1.4. Cutter angles are checked to improve efficiency by minimising expended cutting energy in mill operations</p> <p>1.5. Cutting tool condition is checked against required dimensions, angles and finish</p> <p>1.6. Additional cutting processes are assessed and documented in line with workplace procedures</p> |
| 2. Select and set up grinder | <p>2.1. Work is conducted using prescribed safe operating practices and in line with workplace procedures</p> <p>2.2. Suitable personal protective equipment and clothing are used and maintained</p> <p>2.3. Potential and existing risks and hazards in the work area are identified and controlled</p> <p>2.4. <i>Grinder and attachments</i> are selected and <i>set up</i> to suit required operations on cutting tool and final dimensions</p> <p>2.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Sharpen cutting tool	<p>3.1. <i>Grinder operations</i> are conducted efficiently and safely in line with manufacturer recommendations</p> <p>3.2. Grinder is monitored for operational effectiveness and coolant is applied as required in line with manufacturer recommendations</p> <p>3.3. Cutting angles are maintained and cutting edges are ground until nicks, lands and other imperfections are removed in line with workplace procedures</p> <p>3.4. Cutting tool teeth are systematically checked for consistent measurements to specifications</p> <p>3.5. Cutting tool is removed and stored to maintain cutting edges in line with workplace procedures</p> <p>3.6. Cutting tools that cannot be sharpened or are damaged during the process and cannot be repaired are <i>dealt with</i> in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>3.7. Faults, malfunctions and problems are recognised, recorded and reported in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; use safe workplace practices and procedures to sharpen cutting tools; sharpen a range of cutters, routers and tooling to enterprise required surface, finish and texture
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to locate, interpret and apply relevant information and specifications in written, diagrammatic and verbal form; interpret and apply common industry terminology; convey information in written, sketch and verbal form; record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults;

REQUIRED SKILLS AND KNOWLEDGE

demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sharpening cutting tools
- Environmental protection requirements, including the safe disposal of waste material, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sharpening cutting tools
- Environmental risks and hazards
- Using energy effectively and efficiently
- Operational principles and limitations of cutting tools, grinders and attachments
- Types of rotary cutting tools
- Alternative grinding processes and equipment for sharpening cutting tools, including wheel selection
- Abrasive wheel technology, including wheel types, safe use and storage, cutting speeds, special applications, selection, specifications and design limitations
- Procedures for determining cutting tool dimensions
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can accurately determine cutting tool dimensions and select and set up appropriate grinding equipment to sharpen cutting tools using safe workplace practices and procedures

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to sharpening cutting tools
- following organisational policies and procedures relevant to sharpening cutting tools
- determining cutting tool dimensions
- selecting and setting up grinder and attachments
- safely sharpening cutting tools

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required

RANGE STATEMENT

- actions relating to forest fire
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements may include:**
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Cutting tools may include:**
- cutters
 - profile cutters
 - routers
 - other rotary cutting tools

RANGE STATEMENT

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- line management

Cutting tool dimensions include:

- diameter
- profiles
- angles
- tolerances

Grinders and attachments may include:

- tool and cutter grinders
- surface grinders
- pedestal or bench grinders
- mounted grinders and other specialist grinding equipment
- slicers
- mincer plates
- chucks
- collets
- clamps
- motorised or non-motorised attachments
- dividing heads
- stationary abrasive wheel dressing attachments
- dial indicators
- templates
- air or manually-operated attachments, such as those used in helical grinding
- drill bit holders
- automatic feed systems
- vices
- resting brackets

Set up may include:

- selecting and mounting grinding wheel on grinder
- dressing grinding wheel to maintain cutting surface and suit cutting tool dimensions
- configuring grinder attachments to suit cutting tool dimensions and profile

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding

RANGE STATEMENT

- use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Grinder operations** may include:
- selecting grinding speeds and feeds to suit grinding wheel material and configuration, and cutting tool material
 - adjusting grinder to tool surfaces to ensure material removal remains within grinder and wheel capacities
- Dealing with** may include:
- recycling cutting tools that cannot be sharpened or are damaged during the process and cannot be repaired
 - sending cutting tools that cannot be sharpened or are damaged during the process and cannot be repaired to landfill

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3211B Maintain sawdoctoring tools

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to assess tool wear and the need to recondition straight edges and tension guides using grinders or other enterprise-accepted reconditioning methods

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3211A Maintain sawdoctoring tools

Application of the Unit

Application of the unit The unit involves maintaining sawdoctoring tools in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for maintenance	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to maintaining sawdoctoring tools are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Sawdoctoring tools to be reconditioned are removed from the designated machinery</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Maintenance process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Recondition straight edge	<p>2.1. <i>Straight edge</i> damage and wear are assessed in line with site procedures</p> <p>2.2. <i>Grinder</i> or other accepted method is used to remove damage or wear in line with site procedures</p> <p>2.3. Correct work angle for re-surfacing or removal of wear is determined in line with site procedures</p> <p>2.4. Straight edge is clamped at the correct angle to</p>

ELEMENT**PERFORMANCE CRITERIA**

- prevent movement, vibration and slippage during the re-surfacing process
- 2.5. Abrasive wheel or cutting tool is inspected and if required, cleaned or changed to suit work material removal, *tolerance* and *surface texture* requirements
- 2.6. Straight edge is reconditioned to required accuracy and tolerance without being subjected to overheating or methods that cause distortion, and all signs of wear or damage are removed
- 2.7. Straight edge is cleaned and edges deburred in line with site procedures
- 2.8. Sawdoctoring tools distorted during the process are *dealt with* in line with site procedures, manufacturer recommendations and environmental requirements
3. Recondition tension gauge
- 3.1. Grinder or other appropriate enterprise method for *reconditioning tension gauges* is selected in line with site procedures
- 3.2. Grinder is set to produce the *radius or circle diameter* required for the tension gauge
- 3.3. Tension gauge is positioned and securely clamped in grinder to ensure chord height is central to gauge length and arc is ground square to the plane of the gauge body
- 3.4. Grinding wheel is inspected, *dressed* and changed to suit work, material and required tolerance
- 3.5. Gauge is reconditioned by grinding to required accuracy and profile until all visible edge and face wear has been removed
- 3.6. Grinding is done at *speeds and feeds* that avoid overheating, distortion and burn marks
- 3.7. Tension gauges distorted during the process are dealt with in line with site procedures, manufacturer recommendations and environmental requirements
- 3.8. Reconditioning process and equipment faults are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely maintain sawdoctoring tools
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for maintaining sawdoctoring tools
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for maintaining sawdoctoring tools
- Environmental risks and hazards
- Using energy effectively and efficiently
- Characteristics of sawdoctoring tools
- Grinding procedures
- Tolerances, speeds and feeds
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently maintain sawdoctoring tools according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to maintaining sawdoctoring tools
- following organisational policies and procedures relevant to maintaining sawdoctoring tools
- maintaining sawdoctoring tools in line with prescribed organisational requirements

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks,

EVIDENCE GUIDE

with questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements

RANGE STATEMENT

- Work order** is to include:
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - instructions for the reconditioning of sawdoctoring tools
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** is to include:
- grinders and grinding attachments
 - straight edges
 - feeler gauges
 - templates
 - hand files
 - oil stones
 - vernier callipers
 - micrometers
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Straight edge** may include:
- checking level and flatness of saw blades
 - machine alignment
 - alignment of mechanical parts
 - timber
 - any other surface required to be flat or level
- Grinder** may include:
- bench and pedestal grinders with holding, clamping or profiling attachments

RANGE STATEMENT

- automatic feed
- Tolerance** is the enterprise-accepted curvature of the radius on tension gauges and ratio to perfect flatness and straightness from 0 degrees for both tension gauges and straight edges
- Surface texture:**
- is the measured roughness value of the freshly ground or filed surface on a straight edge or tension gauge
 - of ground or filed surfaces requires a high quality machined surface finish with edges free of any burrs, nicks or dents that may interfere with accuracy of light readings
- Dealing with** may include:
- recycling distorted tools/gauges
 - sending distorted tools/gauges to landfill
- Reconditioning** is to include:
- grinding, machining or filing the straight edge or tension gauge edges to maintain edge straightness and flatness
 - removing all signs of wear from reference surfaces
 - removing all types of distortions from tension gauge and straight edge bodies to achieve required flatness and straightness of tolerances
- Tension gauge** is used to measure tension drop or curvature in wide band and circular saw blades
- Radius or circle diameter** is the arc ground onto the tension gauge suited to the amount of curvature required in the blade
- Dressing** is to include:
- cleaning or shaving the top surface of the grinding wheel to remove the build-up of old sharpening metal and coolant
- Speeds and feeds** is:
- the cutting speed (in m/min or m/sec of the abrasive wheel) at which grinding passes are made across surfaces
 - the amount of material removed in a single pass by the abrasive wheel
- Records and reports** may include:
- product type and size
 - inspection information
 - maintenance outcomes
 - common and recurring faults
 - malfunctions and damage
 - hazards and incidents

RANGE STATEMENT

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3212B Replace saws, blades and guides

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to maintain equipment, including replacing blunt saws, blades, knives and guides

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3212A Replace saws, blades and guides

Application of the Unit

Application of the unit

The unit involves replacing saws, blades and guides in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------------------|--|
| 1. Prepare for replacement | <ul style="list-style-type: none"> 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to replacing saws, blades and guides are identified and followed 1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i> 1.3. <i>Saws, blades and guides</i> to be <i>replaced</i> are <i>transported</i> to designated machinery in line with site procedures and OHS requirements 1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations 1.5. Replacement process is planned in line with site procedures and environmental requirements 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Replace saws, blades and guides | <ul style="list-style-type: none"> 2.1. <i>Change over procedure</i> is followed in line with OHS requirements and site procedures 2.2. <i>Mechanical lifting aids</i> are used in line with safety and site requirements 2.3. Mechanical and safety <i>components</i> are removed to provide access to saws or blades and guides without damage to components 2.4. Components are removed and temporarily stored in a safe location 2.5. Saw, blade or guide is removed and replacement |

ELEMENT**PERFORMANCE CRITERIA**

- parts are installed in line with manufacturer recommendations and site procedures
- 2.6. Mechanical and safety components are replaced and secured in line with manufacturer recommendations and site procedures
- 2.7. Serviced equipment is checked for correct alignment, position and overall free operational performance
- 2.8. Equipment faults and problems associated with the changing procedure are **recorded and reported** to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely replace saws, blades and guides; efficiently and safely remove, replace, or adjust mechanical components on designated machines and equipment
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for replacing saws, blades and guides
- Environmental protection requirements, including the safe disposal of waste material, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for replacing saws, blades and guides
- Environmental risks and hazards

REQUIRED SKILLS AND KNOWLEDGE

- Using energy effectively and efficiently
- Characteristics of saws, blades and guides
- Removal and replacement procedures
- Equipment components and their positioning and tolerance specifications in relation to other components
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently replace saws, blades and guides in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to replacing saws, blades and guides
- following organisational policies and procedures relevant to replacing saws, blades and guides
- replacing saws, blades and guides in line with the work order and prescribed organisational requirements

Context of and specific resources for

- Competency is to be assessed in the workplace or realistically simulated workplace

EVIDENCE GUIDE

assessment

- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment

EVIDENCE GUIDE

task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards

RANGE STATEMENT

- confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the removal of saws, blades and guides in designated equipment
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Saws, blades and guides** may include:
- circular saws
 - canter or chipper head blades and knives
 - narrow and wide band saw blades
 - guides for various types of sawing machines
- Replacement** is the process of removal and installation of

RANGE STATEMENT

reconditioned or new saws, blades and guides in various types of cutting equipment

Transport is to include:

- mechanical aids, such as mobile trolleys used to convey:
 - saws
 - knives
 - guides
 - tools
- other required equipment to the work area

Equipment is to include:

- spanners, wrenches and sockets for removing parts
- any other equipment used for holding, lifting or shifting mechanical components

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- isolation of the equipment
- removal of the components, saws, blades or guides and the replacement of all these parts

Changeover procedure is to include:

Mechanical lifting aids may include:

- block and chain
- pedestrian-operated crane
- pulley system

Components include:

- mechanical and safety components, such as:
 - electrical motors
 - riving knives
 - access covers
 - saw guards
 - extraction equipment

Records and reports may include:

- product type and size
- inspection information
- maintenance outcomes
- common and recurring faults

RANGE STATEMENT

- malfunctions and damage
- hazards and incidents

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3213B Manufacture cutting tools

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to manufacture cutting tools. The unit involves selecting the correct material and machining blanks to correct profiles

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3213A Manufacture cutting tools

Application of the Unit

Application of the unit

The unit involves manufacturing cutting tools in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------|---|
| 1. Select required material | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to manufacturing cutting tools are identified and followed</p> <p>1.2. <i>Communication</i> with others involved in this work is established and maintained in line with OHS and organisational requirements</p> <p>1.3. <i>Work order</i> is reviewed to determine <i>cutting tool</i> dimensions in line with site procedures</p> <p>1.4. <i>Information</i> about timber and equipment is obtained and reviewed to determine preferred material type</p> <p>1.5. <i>Material</i> is selected and cut to suitable lengths for machining cutting tool blank in line with site procedures</p> |
| 2. Machine blank | <p>2.1. <i>Processes</i> to produce blank are determined in line with site requirements and job specifications</p> <p>2.2. Blank dimensions and <i>tolerances</i> are determined in line with work order and associated information</p> <p>2.3. Machining equipment and <i>setups</i> are performed in line with manufacturer recommendations and industry practices</p> <p>2.4. Blank is machined to required dimensions and tolerances using the selected processes</p> <p>2.5. <i>Checking procedures</i> are performed on blank surface finish and dimensions to ensure job requirements are met</p> |
| 3. Machine required | <p>3.1. Blank is positioned in suitable attachments in</p> |

ELEMENT	PERFORMANCE CRITERIA
profiles	<p>preparation for machining of tooth profiles</p> <p>3.2. Setups are performed in line with job requirements and site procedures</p> <p>3.3. Machining procedures are followed to ensure each tooth profile and dimension meets required dimensions and tolerance in line with site procedures and job requirements</p> <p>3.4. Checking procedures are performed on profile surface finish and dimensions to ensure job requirements are met</p> <p>3.5. Sub-standard cutting tools are <i>dealt with</i> in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>3.6. Routine checks and maintenance procedures are conducted on cutting tools in line with manufacturer recommendations and site procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; operate equipment and material over the full range of processes for manufacturing cutting tools; machine tool profiles and blanks using safe workplace practices and procedures; machine blanks to technical requirements
- Communication skills sufficient to use appropriate interpersonal techniques and communication methods with colleagues and others
- Literacy skills sufficient to locate, interpret and apply relevant information and specifications in written, diagrammatic and verbal form; interpret and apply common industry terminology; convey information in written, sketch and verbal form; record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for manufacturing cutting tools

- Environmental protection requirements, including the safe disposal of waste material, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for manufacturing cutting tools
- Operational principles and limitations of relevant machinery and equipment
- Environmental risks and hazards
- Using energy effectively and efficiently
- Machining processes
- Procedures for determining cutting tool dimensions
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently manufacture cutting tools demonstrating the correct selection of material and equipment, and determine and perform the necessary processes in machining blanks and profiles

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to manufacturing cutting

EVIDENCE GUIDE

- tools
- following organisational policies and procedures relevant to manufacturing cutting tools
 - safely manufacturing cutting tools that meet industry standards and technical requirements
 - applying communication techniques and safe work practices in the work area
 - interpreting and applying specifications in written, diagrammatic and verbal form
 - applying mathematical procedures, such as estimation and measurement
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied

EVIDENCE GUIDE

under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements may include:**
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Communication may include:**
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative

RANGE STATEMENT

- language
- use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Work order** may include:
- drawings
 - plans
 - technical diagrams
 - references
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Cutting tools** may include a range of:
- diameters
 - profiles
 - angles
 - tolerances
- Information** may include:
- timber characteristics such as:
 - splits
 - bows
 - knots
 - twists
 - warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
 - equipment data, such as:
 - organisation terminology
 - fault reports
 - consumption reports
 - internal memos
 - production records
 - stock records
 - machine data outputs
 - time sheets
 - accident and incident reports

RANGE STATEMENT

Material

may be selected from stock or procured to minimise wastage and machining operations

Processes may include:

- manufacturing from long blank lengths and are determined in line with:

- available machinery
- materials
- tools
- equipment
- diameters
- widths
- lengths
- angles
- inter-tooth variations

Tolerances may include:**Setups may include:**

- feeds and speeds set appropriate to material, equipment, blank, attachments and tooth profiles
- material temperatures kept within specified limits through appropriate use of machining coolants

Checking procedures may include:

- use of measuring equipment, such as:
 - vernier callipers
 - micrometers
 - rules

Dealing with may include:

- recycling sub-standard cutting tools
- sending sub-standard cutting tools to landfill

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3214B Take off material quantities

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to estimate the correct material quantities and pricing in relation to take off items, and includes preparing and itemising materials, detailing material sizes and quantities, and calculating quantity pricing

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3014A Take off material quantities

Application of the Unit

Application of the unit

The unit involves take off material quantities in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare and itemise materials	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>take off</i> material quantities are identified and followed</p> <p>1.2. <i>Documentation</i> and <i>specifications</i> are obtained and interpreted to determine <i>material types</i> and job requirements</p> <p>1.3. Components to be listed are identified and general <i>detailing and dimensioning systems</i> integrated</p> <p>1.4. Tables for listing are prepared and required items are listed and categorised in line with industry standards</p> <p>1.5. Materials are detailed in <i>lists</i> in line with customer requirements and site procedures</p> <p>1.6. Common industry materials are selected where no specific information is provided and material is not critical to design</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Detail material sizes and quantities	<p>2.1. Physical dimensions for components are read, calculated, scaled or extracted from tables, in line with industry, site and job requirements</p> <p>2.2. Material quantities are estimated in line with site procedures and expressed as industry <i>standard</i></p>

ELEMENT	PERFORMANCE CRITERIA
3. Calculate quantities and prices	<p>lengths or sheet sizes</p> <p>2.3. <i>Wastage</i> is allowed for in estimated quantities</p> <p>2.4. Multiple requirements for identical material are accumulated and total quantities are given</p> <p>2.5. Notes and <i>records</i> are maintained and completed in line with detail of material usage, and cutting and machining requirements</p> <p>3.1. Total requirements for each line item in take off are calculated and documented in line with customer requirements and site procedures</p> <p>3.2. Quantities are expressed in <i>measurement units</i> that match item type, customer requirements and site procedures</p> <p>3.3. Costs are calculated from item rate and presented in line with specific job requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely take off material quantities
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for taking off material quantities
- Environmental protection requirements, including the safe disposal of waste material

REQUIRED SKILLS AND KNOWLEDGE

- Organisational and site standards, requirements, policies and procedures for taking off material quantities
- Environmental risks and hazards
- Using material effectively and efficiently
- Estimating and quantifying
- Products and materials related to take off items
- Pricing arrangements
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently estimate and calculate cost and quantities of take off material

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to taking off material quantities
- following organisational policies and procedures relevant to taking off material quantities
- preparing detail and organising material types in line with organisational requirements
- calculating quantities and costing of take off

EVIDENCE GUIDE

Context of and specific resources for assessment

materials in line with organisational requirements

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Take off** may include:
- timber-based constructed items where designs have been completed and detailed requirements for item dimensions and individual component materials and sizes are provided
- Documentation** may include:
- drawings and drawing notes
 - sketches
 - customer requirements
 - site instructions
 - information from work colleagues
 - other documentation relating to design of timber construction
 - components listing
 - dimensional and detailing data
- Specifications** may include:
- take off requirements
 - purpose

RANGE STATEMENT

- Material types** may include:
- overall design of timber construction
 - panels of common manufactured types and surface treatments
 - sawn timber with a range of finishes
 - laminated timber
 - timber of varying species
 - other common building materials and hardware
- Detailing and dimensioning systems** may be by:
- manual techniques
 - with the aid of suitable computer software, such as computer-based retrieval systems
- Lists:**
- are laid out so that the size, type and end use of materials are separated
 - conform to industry terminology and provide sufficient detail to fully specify the material
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Standards** are to include:
- industry set sizes for timber and their quality levels
- Wastage** may include:
- edge or end trimming
 - scarf losses
 - cutting angle losses
- Records** may include:
- product type and size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- Measurement units** may include:
- lineal metres
 - cubic metres
 - unit numbers

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3215B Swage and shape saw blades

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to widen then press into shape through a cold forming process, the cutting points of saw teeth to create a block that has the required hook, back, tangential and radial clearance angles needed to provide clearance in the cut for the saw blade to enable sawing efficiency

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3215A Swage and shape saw blades

Application of the Unit

Application of the unit

The unit involves swaging and shaping saw blades in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Set up equipment	<p>1.1.Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to swaging and shaping saw blades are identified and followed</p> <p>1.2.Required <i>swage</i> shape and thickness are acquired from existing <i>saws</i> and relevant <i>information</i></p> <p>1.3.Saw, swage and shaping equipment are set up in line with enterprise requirements</p> <p>1.4.<i>Die</i> or <i>swage clamp/vice</i> shape is checked against the required shape, clearances and <i>kerf</i>, and changed where necessary to suit</p> <p>1.5.Saw is secured in a swage clamp/vice or <i>swager</i> with teeth aligned to the swager or vice shape</p> <p>1.6.Anti-scuffing paste is applied to the areas of the saw that will be swaged</p> <p>1.7.<i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Swage teeth	<p>2.1.<i>Trial</i> swage is completed and swaging setup checked</p> <p>2.2.Successful trial swage is included in the process and unsuccessful trial swage is dealt with in line with site procedures and environmental requirements</p> <p>2.3.Swage shape and thickness are inspected and <i>measuring equipment</i> is used for tangential and</p>

ELEMENT	PERFORMANCE CRITERIA
	radial, clearance and kerf
	2.4.Swaging operation is adjusted in line with manufacturer recommendations and job specifications
	2.5.Dies are checked for wear and adjusted in line with manufacturer recommendations and site procedures
	2.6.Remaining teeth are swaged in line with job specifications
3. Shape teeth	3.1.Excess material resulting from swaging process is filed and shaped
	3.2.Trial <i>shape</i> is completed and tooth <i>tolerances</i> are checked and adjusted where necessary
	3.3.Successful trial shape is included in the process and unsuccessful trial shape is <i>dealt with</i> in line with site procedures and environmental requirements
	3.4.Shape is assessed and adjustments are made to meet site procedures
	3.5.Remaining teeth are shaped in line with job specifications and tooth alignment is checked
	3.6.Swaging process and equipment faults are <i>recorded and reported</i> to appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely swage and shape saw blades
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for swaging and shaping saw blades
- Environmental protection requirements, including the safe disposal of waste material, and the safe use and storage of chemicals
- Organisational and site standards, requirements, policies and procedures for swaging and shaping saw blades
- Environmental risks and hazards
- Saw characteristics
- Swaging and shaping procedures
- Tolerances
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently swage and shape the teeth on band, circular or frame saws in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to swaging and shaping

EVIDENCE GUIDE

- saw blades
- following organisational policies and procedures relevant to swaging and shaping saw blades
 - inspecting kerf and swage block to assess both as part of the setup procedures for swaging and shaping
 - swaging and shaping teeth in line with organisational requirements and specifications
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency

EVIDENCE GUIDE

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Swage

is the process of cold forming the upper portion of the tooth to leave a concave but broader tooth point

Saws may include:

- circular saws
- band saws
- gang saws

Information may include:

- organisational terminology
- fault reports
- site records
- manufacturer recommendations

RANGE STATEMENT

- internal memos
- production records
- stock records
- machine data outputs
- accident and incident reports

Die is the eccentric specially hardened rod that is turned against the tooth face under pressure to spread tooth steel sideways

Swage clamp/vice is the mechanical support responsible for setting saw blade height and holding the blade in position during the swaging and shaping processes

Kerf is the width of the uppermost part of a tooth responsible for maintaining clearance for the blade during the sawing process

Swager is the machine or hand-held mechanical item of equipment that produces a swage on the tooth point

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Trial is the process of testing the tooth specifications after it has been swaged

Measuring equipment may include:

- wire gauge
- test bar
- rule
- micrometer
- vernier callipers

Shape is the act of compressing the excess steel formed during swaging to produce the swage block that incorporates the radial and tangential angles

RANGE STATEMENT

Tolerance is the allowable upper limit of width for the swage block

Dealing with may include:

- recycling unsuccessful trials
- sending unsuccessful trials to landfill

Records and reports may include:

- saw type
- size
- inspection information
- maintenance outcomes
- common and recurring faults
- malfunctions and damage
- hazards and incidents

and may be:

- manual
- using a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3216B Assess and maintain saw performance

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assess, verify, test and rectify cutting problems on chipping and sawing machines, saw blades, knives and associated equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3216A Assess and maintain saw performance

Application of the Unit

Application of the unit

The unit involves assessing and maintaining saw performance in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---------------------------------------|---|
| 1. Inspect and test saw and equipment | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to assessing and maintaining saw performance are identified and followed</p> <p>1.2. Information relating to current and past performance problems is obtained and reviewed to assess process problems</p> <p>1.3. <i>Saw</i> and equipment are observed under a range of operating conditions to determine the extent of the problems</p> <p>1.4. <i>Timber</i> fed through saw is examined to determine potential causes of cutting problem</p> <p>1.5. Saw and equipment are inspected to identify worn, broken and loose components in line with manufacturer instructions and recommendations</p> <p>1.6. <i>Equipment lock-out procedures</i> are applied in line with OHS and workplace procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Assess technical performance | <p>2.1. <i>Technical performance</i> of sawing operation is assessed to identify future improvements in line with site procedures</p> <p>2.2. Technical performance is compared against other equipment to determine possible efficiencies</p> <p>2.3. Options for new equipment are assessed to determine feasibility of improvements in performance</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Rectify saw problems	<p>2.4. Endorsement from appropriate personnel of identified improvements is obtained as required</p> <p>3.1. Potential causes are diagnosed through the occurring problem and its characteristics</p> <p>3.2. Assessed causes are validated by reference to other trades and by operations personnel</p> <p>3.3. Multiple causes are assessed and action is planned, with alternative courses of action canvassed with relevant personnel to identify and agree on preferred option</p> <p>3.4. Selected course of action is implemented and cutting results are re-examined and reviewed</p> <p>3.5. Action and results are communicated to appropriate personnel</p> <p>3.6. Causes of cutting problems and actions taken are accurately recorded and reported in line with site procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely assess and maintain saw performance
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assessing and maintaining saw performance

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material, and the minimisation of carbon emissions
- Organisational and site standards, requirements, policies and procedures for assessing and maintaining saw performance
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of saws and related equipment, and causes of problems and solutions
- Assessment and rectification procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess and maintain saw performance

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to assessing and maintaining saw performance
- following organisational policies and procedures relevant to assessing and maintaining saw performance

EVIDENCE GUIDE

- assessing saw problems through information gathering, testing and inspecting equipment, and assessing possible causes
 - selecting and implementing the correct course of action to rectify saw problems
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate

EVIDENCE GUIDE

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth,

RANGE STATEMENT

state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements may include:

Saws may include:

- individual items of wood cutting machinery, including:
 - band saws
 - circular saws
 - gang saws
 - chippers
 - canters

Timber may include:

- hardwoods
- softwoods
- native
- imported species

RANGE STATEMENT

Equipment lock-out procedures are to include:

- protecting operators and co-workers from accidental injury by isolating the equipment from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Technical performance may relate to:

- rectification methods to solve sawing problems
- methods to improve saw performance
- comparison against other equipment to identify efficiencies
- potential application to other machinery

Causes may include:

- forcing timber through the equipment
- damage from foreign matter
- incorrect operating speeds
- oversized material removal
- incorrect setting of equipment
- poor sharpening or setting of saw blades

Action usually includes:

- reversal
- education relating to the causes or development of alternative strategies

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Records and reports may include:

- equipment type
- size
- inspection information
- maintenance outcomes
- common and recurring faults
- malfunctions and damage
- hazards and incidents

RANGE STATEMENT

and may be:

- manual
- using a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3217B Assess and maintain cutter performance

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to inspect and test routing, moulding and planing machines and associated equipment to assess performance against enterprise and industry standards and rectify cutting problems

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3217A Assess and maintain cutter performance

Application of the Unit

Application of the unit The unit involves assessing and maintaining cutter performance in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| <p>1. Inspect and test cutters and equipment</p> | <p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to assessing and maintaining cutter performance are identified and followed</p> <p>1.2. Information relating to current and past performance problems is obtained and reviewed to assess process problems</p> <p>1.3. <i>Cutter</i> and equipment are observed under a range of operating conditions to determine the extent of the problems</p> <p>1.4. <i>Timber</i> fed through cutters is examined to determine potential causes of cutting problem</p> <p>1.5. Cutters and equipment are inspected to identify worn, broken and loose components in line with manufacturer instructions and recommendations</p> <p>1.6. <i>Equipment lock-out procedures</i> are applied in line with OHS and workplace procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| <p>2. Assess technical performance</p> | <p>2.1. <i>Technical performance</i> of cutting operation is assessed to identify future improvements in line with site procedures</p> <p>2.2. Technical performance is compared against other</p> |

ELEMENT**PERFORMANCE CRITERIA**

- equipment to determine possible efficiencies
- 2.3. Options for new equipment are assessed to determine feasibility of improvements in performance
- 2.4. Endorsement from appropriate personnel of identified improvements is obtained as required
3. Rectify cutter problems
- 3.1. Potential *causes* are diagnosed through the occurring problem and its characteristics
- 3.2. Assessed causes are validated by reference to other trades and by operations personnel
- 3.3. Multiple causes are assessed and *action* is planned, with alternative courses of action canvassed with the relevant personnel to identify and agree on preferred option
- 3.4. Selected course of action is implemented and cutting results are re-examined and reviewed
- 3.5. Action and results are communicated to *appropriate personnel*
- 3.6. Causes of cutting problems and actions taken are accurately *recorded and reported* in line with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely assess and maintain cutter performance
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assessing and maintaining cutter performance
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for assessing and maintaining cutter performance
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of cutters and related equipment
- Assessment and rectification procedures
- Cutter and related equipment causes of problems and solutions
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess and maintain cutter performance

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and

EVIDENCE GUIDE

- codes of practice relevant to assessing and maintaining cutter performance
 - following organisational policies and procedures relevant to assessing and maintaining cutter performance
 - assessing cutter problems through information gathering, testing and inspecting equipment, and assessing possible causes
 - selecting and implementing the correct course of action to rectify cutter problems
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred

EVIDENCE GUIDE

to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

RANGE STATEMENT

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Cutter may include:

- cutters for individual items of wood cutting machinery, including:
 - routers
 - moulders
 - planers
 - chippers
 - canters

RANGE STATEMENT

Timber may include:

- hardwoods
- softwoods
- native species
- imported species

Equipment lock-out procedures are to include:

- protecting operators and co-workers from accidental injury by isolating the equipment from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Technical performance may relate to:

- rectification methods to solve cutter problems
- methods to improve cutter performance
- comparison against other equipment to identify efficiencies
- potential application to other machinery

Causes may include:

- forcing timber through the equipment
- damage from foreign matter
- incorrect operating speeds
- oversized material removal
- incorrect setting of equipment
- poor sharpening or setting of saw blades

Action usually includes:

- reversal
- education relating to the causes or development of alternative strategies

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Records and reports may include:

- equipment type
- size
- inspection information
- maintenance outcomes

RANGE STATEMENT

- common and recurring faults
- malfunctions and damage
- hazards and incidents

and may be:

- manual
- using a computer-based system
- another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3218B Quote and interpret from manufactured timber product plans

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to manually prepare quotations, interpret plans and layouts and detail tasks and materials for simple trusses and/or frames and/or floors

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3218A Quote and interpret from manufactured timber product plans

Application of the Unit

Application of the unit

The unit involves quoting and interpreting from manufactured timber product plans in a timber and wood products production setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Interpret plans and loading conditions | <p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to the manual preparation of quotes for simple <i>trusses</i> and/or frames and/or floors are identified and followed</p> <p>1.2. Plans and <i>work requirements</i> are identified, interpreted and <i>assessed</i></p> <p>1.3. Drawing views and notes are interpreted and other design requirements and restrictions are identified and followed</p> <p>1.4. Additional information and data is obtained from <i>appropriate personnel</i> and <i>other sources</i></p> <p>1.5. Functional and pictorial images of structure, simple trusses and/or frames and/or floors are created based on work requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS and organisational requirements</p> |
| 2. Undertake manual quote of roof and floor trusses | <p>2.1. Roof truss types are selected to meet work requirements and common industry spacings of trusses and their components are imposed on the plan to define structure</p> |

ELEMENT**PERFORMANCE CRITERIA**

- 2.2. *Layouts*, spacing and sizing of individual structural members are progressively determined in line with work requirements
- 2.3. Quantities for bracing and ancillaries for roof trusses are *calculated* and documented
- 2.4. *Floor truss information* and details are interpreted from plan documentation
- 2.5. Appropriate floor trusses are selected from the range of certified standard designs
- 2.6. Quotation for roof and floor trusses is prepared, checked and recorded in line with workplace procedures
3. Undertake manual detailing of roof and floor trusses
- 3.1. *Design details* are reviewed and revised without compromising truss or structure strength
- 3.2. Structure layout drawings and truss *assembly drawings* are produced in line with work requirements and manufacturing requirements
- 3.3. Component cutting detail is produced in line with manufacturing requirements and schedules
- 3.4. Design records are reviewed for design integrity, completeness and consistency in line with workplace and applicable certifying authority standards
- 3.5. Roof and floor truss *installation package* is assembled in line with workplace procedures and *industry standards*
4. Undertake manual quote and detailing of wall frames
- 4.1. Lengths of wall frames are measured from plans and dimensions calculated appropriate to timber sizes
- 4.2. Quotation for wall frames including costing per unit length is prepared, checked and recorded in line with workplace procedures
- 4.3. Timber type and species for wall frames is selected appropriate to *material* availability and work requirements
- 4.4. Design of wall frames for fabrication is calculated from plans and specifications, and assembly drawings are produced in line with work order and manufacturing requirements

ELEMENT

PERFORMANCE CRITERIA

- 4.5. Component cutting detail is produced in line with manufacturing requirements and schedules
- 4.6. Design records are reviewed for design integrity, completeness and consistency in line with workplace and applicable certifying authority standards
- 4.7. Wall frames installation package is assembled in line with workplace procedures and industry standards
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level required for this unit.

Required skills

- The ability to comply with applicable legislation, regulations, standards, codes of practice and established safe practices and procedures for quoting and interpreting from manufactured timber product plans
- Technical skills sufficient to locate, interpret and apply relevant information and specifications in written, diagrammatic and/or verbal form; to produce realistic quotes and practical designs suitable for manufacture, and to safely quote and detail trusses and frames using manual methods
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; to accurately record and report

REQUIRED SKILLS AND KNOWLEDGE

workplace information and maintain documentation

- Literacy skills sufficient to interpret and apply common industry terminology and convey information in written, sketch and/or verbal form
- Numeracy skills sufficient to select appropriate mathematical processes to calculate dimensions and measure lengths and spans
- Problem solving skills sufficient to identify problems and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for quoting and interpreting from manufactured timber product plans
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for quoting and interpreting from manufactured timber product plans
- Applications of building and structural regulations and site policies and procedures
- Procedures for preparing design, detailing and quotations for trusses and/or frames and/or floors
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment relevant to quoting and interpreting from manufactured timber product plans, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for the use of scientific calculators, scale rules and tables; and for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can accurately interpret plans to accurately quote and detail trusses

EVIDENCE GUIDE

and/or frames and/or floors using manual methods in line with industry and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to quoting and interpreting from manufactured timber product plans
- following organisational policies and procedures relevant to quoting and interpreting from manufactured timber product plans
- applying effective communication techniques and safe work practices in the work area
- interpreting plans, specifications and loading conditions
- quoting and detailing trusses and/or frames and/or floors
- producing realistic estimates and practical designs suitable for manufacture

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to quoting and interpreting from timber manufactured product plans
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE

application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

RANGE STATEMENT

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements including waste disposal, recycling and re-use guidelines

RANGE STATEMENT

Trusses may include

- roof trusses
- floor trusses

Work requirements may include:

- loading requirements
- applicable codes
- common industry practices
- specific customer preferences
- transport regulations
- fabricating limitations

Assessment may include

assessment of:

- concentrated loads and externally applied loads (wind, surround structures, common or special building usage)
- requirements for columns, beams and lintels
- dimensions defining geometry and loading of individual trusses and frames

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- line management
- software support engineers

Other sources may include:

- suppliers
- manufacturers
- architect
- builder
- local council

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Layouts

- of roof trusses are carried out manually (tables and scientific calculator)

Calculations may include:

- quantities of timber for trusses and/or frames and/or floors
- quantities of ancillaries and bracing

RANGE STATEMENT

Floor truss information may include:

- costing of materials and labour
- span
- spacing
- cantilever
- floor loading
- end support

Design details may include:

- timber component species
- type
- cross-section
- grade
- length and cutting angles
- nail plate and other joining hardware sizes
- marking requirements

Assemblies

quoted and detailed may be:

- wooden roof and floor trusses and wall frames and beams for solid brick, brick veneer and timber frame domestic houses and light commercial structures, structural and non structural

Assembly drawing

- details for truss and frame may include design assumptions regarding supporting and tying components

Installation packages may include:

- roof and floor truss assembly drawings, design information, site and certifying authority standards
- wall frame assembly drawings, design information, installation information guides

Industry standards may include:

- Australian standards
- international standards
- nail plate provider standards

Material may include:

- timber of available species and solid or laminated types
- may include timber of available species and solid or laminated types

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3219B Produce standard truss or frame plans and details using computers

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to produce simple truss or frame plans, including details of their fabrication and installation, using computerised systems

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3219A Produce standard truss or frame plans and details using computers

Application of the Unit

Application of the unit

This unit involves producing standard truss or frame plans and details using computers in a forest products factory setting

These skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select software	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to drawing and detailing trusses or frames using computerised systems are identified and followed</p> <p>1.2. <i>Software</i> options are reviewed and evaluated against specified work requirements</p> <p>1.3. Appropriate software program is selected and referred to for direction</p>
2. Interpret plans and loading conditions	<p>2.1. Plans and work requirements are identified, interpreted and <i>assessed</i></p> <p>2.2. Drawing views and notes are interpreted, and other design requirements and restrictions are identified</p> <p>2.3. Additional information and data are obtained from <i>appropriate personnel</i> and other sources</p> <p>2.4. Functional and pictorial <i>image</i> of <i>structures</i>, trusses or frames is created</p> <p>2.5. Design requirements outside normal software limitations are specified and referred to appropriate personnel</p> <p>2.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
3. Test design options	<p>3.1. Fixed <i>design details</i> are transferred to layout data in</p>

ELEMENT	PERFORMANCE CRITERIA
and select optimum	<p>line with software requirements</p> <p>3.2.Frame or truss types are specified and timber type and species selected in line with material suitability and availability</p> <p>3.3.Common industry spacing of frames, trusses and their components are set to the defined design structure in line with industry standards</p> <p>3.4.Component sizes are fixed to clarify and confirm design options</p> <p>3.5.Layouts, spacing and sizing of individual structural members are progressively selected in line with software requirements</p> <p>3.6.Design details are selected, reviewed and revised in line with work order</p>
4. Produce layouts and cutting requirements	<p>4.1.Design records are reviewed for design integrity, completeness and consistency in line with workplace and applicable certifying authority standards</p> <p>4.2.Structure layout drawings and truss or frame assembly drawings are produced using software in line with workplace and software requirements</p> <p>4.3.Component cutting detail is produced in line with manufacturing requirements and schedules</p> <p>4.4.Installation package is assembled in line with workplace procedures and industry standards</p> <p>4.5.Design records and documentation are completed and maintained in line with workplace procedures</p>
5. Assist in production and construction	<p>5.1.Questions regarding designs and assembly decisions are answered and explained in a clear and concise manner</p> <p>5.2.Effective communication techniques are used to assist and develop production personnel</p> <p>5.3.Alternative materials or sizes for components are provided within the scope of the design and work requirements</p> <p>5.4.Common site problems are discussed and prevention strategies examined and adopted to ensure future site practice meets design requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level required for this unit.

Required skills include:

- Technical skills sufficient to safely and accurately design and detail timber trusses or frames using computerised methods; produce drawings and cutting lists suitable for manufacture; locate, interpret and apply relevant information and specifications in written, diagrammatic and verbal form; interpret and apply common industry terminology; convey information in written, sketch and verbal form
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to select appropriate mathematical and estimation processes
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures

Required knowledge includes:

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing standard truss or frame plans and details using computers
- Environmental protection requirements, including the safe disposal of waste material, and the minimisation of carbon emissions
- Organisational and site standards, requirements, policies and procedures for producing standard truss or frame plans and details using computers
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Relevant organisational and site standards, requirements, policies and procedures
- Established communication channels and protocols
- Application of building and structural regulations and site policy
- Range, types and uses of computer software
- Common industry terminology for all component types
- Relationship between component loads, supports and spans and component loads, species, type, dimensions and grade
- Industry standard cross section sizes and profiles, length and spacing dimensions
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including

REQUIRED SKILLS AND KNOWLEDGE

- calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently select and use computerised systems to accurately produce and detail simple truss or frame plans, including fabrication and installation requirements in line with industry and organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following organisational policies and procedures relevant to producing standard truss or frame plans and details using computers
- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice, including OHS, environmental and organisational policies and procedures, relevant to producing standard truss or frame plans and details using computers
- applying communication techniques and safe work practices in the work area
- detailing trusses or frames using computerised systems and producing drawings and cutting lists suitable for manufacture
- producing computerised drawings, layouts and cutting requirements
- applying mathematical procedures, such as estimation and measurement
- developing and selecting framing layout options and

EVIDENCE GUIDE

Context of and specific resources for assessment

- detailing framing design
- providing assistance in production and construction
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other

EVIDENCE GUIDE

than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

- Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - lifts and cranes, scaffolding, building codes and regulations
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Software** is a commercial package running on suitable computer hardware and producing designs using specific truss and frame assembly hardware requirements
- Assessment** may include:
- for concentrated loads
 - requirements for columns, beams and lintels
 - dimensions defining geometry and loading of individual trusses and frames
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
 - software support engineers
- Image** includes details of:
- load support
 - loading transfer mechanisms

RANGE STATEMENT

- Structures** may include:
- tying positions
 - timber roofs
 - wall frames and floors of solid brick
 - brick veneer and timber frame domestic houses
 - free-standing or attached timber structures, such as pergolas
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Design details** may include:
- timber component species, type, cross section, grade, length and cutting angles, nail plate and other joining hardware sizes and marking requirements
- and may be:
- selected from options on the basis of fabrication feasibility, ease of erection, cost, material availability, customer preference, and site standards
 - revised without compromising truss, frame or structure strength
- Assembly drawing** details may include:
- design assumptions regarding supporting and tying components
- and may be:
- simple wooden roof trusses, floor trusses, wall frames and beams for solid brick, brick veneer and timber frame simple domestic houses and light commercial structures
- Installation package** may include:
- truss and frame assembly drawings
 - detailing information
 - installation information guides
- Explanations** may be provided to:
- certifying authorities and builders

RANGE STATEMENT

Problems may include:

- detailing errors
- fabrication errors
- site errors

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3220B Quote and interpret from computerised timber manufactured product plans

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to design, detail and prepare a quotation for the fabrication of trusses and/or frames and/or floors using a computerised system

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3220A Quote and interpret from computerised timber manufactured product plans

Application of the Unit

Application of the unit The unit involves quoting and interpreting from computerised timber manufactured product plans in a timber and wood products production setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Select software | 1.1. Applicable <i>Occupational Health and Safety (OHS)</i> , environmental, <i>legislative</i> and <i>organisational</i> requirements relevant to drawing and detailing trusses and/or frames and/or floors using computerised systems are identified and followed |
| | 1.2. <i>Software</i> options are reviewed and evaluated against specified <i>work requirements</i> |
| | 1.3. Appropriate software program is selected appropriate to work requirements |
| 2. Interpret plans and loading conditions | 2.1. Plans and work order documentation are obtained and interpreted |
| | 2.2. Plans are interpreted and work requirements specified, <i>assessed</i> and referred to engineers for calculations |
| | 2.3. Additional information and data required to estimate <i>assemblies</i> is obtained from <i>appropriate personnel</i> or <i>other sources</i> |
| | 2.4. Functional and pictorial <i>images</i> of structures, trusses and/or frames and/or floors are created |
| | 2.5. Design requirements outside software limitations are identified and referred to appropriate personnel |

ELEMENT

PERFORMANCE CRITERIA

3. Use computer programs to estimate trusses and/or frames and/or floors
- 2.6. **Communication** with others is established and maintained in line with OHS and organisational requirements
- 3.1. Fixed design details are transferred to layout data in line with software requirements
- 3.2. Truss and/or frame and/or floor types are identified and timber type and species selected in line with material suitability and availability
- 3.3. Design structure is defined by common industry spacing of trusses or frames or floors and their components in line with *industry standards*
- 3.4. Component sizes are fixed to clarify and firm design options
- 3.5. Layouts, spacing and sizing of individual structural members are progressively selected in line with software requirements
- 3.6. Design details are produced in line with software and work order requirements
- 3.7. Design options are selected on the basis of feasibility, ease of erection, cost, material availability, customer preference and site standards
- 3.8. Design details are reviewed and revised in line with site and customer standards without compromising truss, frame or structure strength
4. Prepare quotation
- 4.1. Estimations are *calculated* and quotation is produced in the designated format using recommended software and computer program
- 4.2. Quotation is reviewed and checked for completeness and accuracy in line with organisational requirements
- 4.3. Modifications are made to computer design to meet work order requirements, if required
- 4.4. Computer records are completed and quotation is prepared for presentation in line with workplace procedures
- 5.
- 6.
- 7.
- 8.

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- 19.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to quote and detail trusses and/or frames and/or floors using computerised systems and software and to interpret design and detail of timber trusses and/or frames and/or floors using available materials and meeting the required standards
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to locate, interpret and apply relevant information, industry terminology and specifications in written, diagrammatic and/or verbal form; ability to accurately record and report workplace information and maintain documentation
- Numeracy skills sufficient to select appropriate mathematical and estimation processes
- Problem solving skills sufficient to identify problems and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for estimating trusses and/or frames and/or floors using computerised systems
- Organisational and site standards, requirements, policies and procedures for estimating trusses and/or frames and/or floors using computerised systems
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

material

- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment relevant to quoting and interpreting from computerised timber manufactured product plans and procedures for their use, operation and maintenance
- Procedures for recording, reporting and maintaining workplace information
- Appropriate mathematical procedures for estimation and measurement
- Application of building and structural regulations and site policy
- Range, types and uses of computer programs and software including estimation software
- Common industry terminology for all component types
- Relationship between component loads, supports and spans and component loads, species, type, dimensions and grade
- Industry standard cross-section sizes and profiles, length and spacing dimensions

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can select and use computerised systems to accurately interpret trusses and/or frames and/or floors and prepare a quotation in line with industry and organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to the full range of processes for estimating trusses and/or frames and/or floors using computerised systems

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- following organisational policies and procedures relevant to the full range of processes for estimating trusses and/or frames and/or floors using computerised systems
- effective communication techniques and safe work practices in the work area
- interpreting plans, loading conditions and technical information and conveying information in written, sketch and oral form
- using a scientific calculator and appropriate computer software to estimate truss, beam and frame materials and quantities
- producing quotations within designated timeframes
- applying mathematical procedures such as estimation and measurement

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related

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conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and

RANGE STATEMENT

substances

- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- lifts and cranes, scaffolding, building codes and regulations

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Software

- will be a commercial package running on suitable computer hardware and producing designs using specific trusses and/or frames and/or floors assembly hardware requirements

Work requirements may include:

- loading requirements
- applicable codes

RANGE STATEMENT

- common industry practices
- specific customer preferences
- transport regulations
- fabricating limitations

Assessment may include

assessment of:

- concentrated loads
- dimensions defining geometry and loading of individual trusses and/or frames and/or floors
- drawing views and notes to identify additional design requirements and restrictions

Assemblies may include:

- wooden roof trusses
- floor trusses and wall frames for solid brick, brick veneer and timber frame domestic houses and light commercial structures

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- line management
- software support engineers

Other sources may include:

- suppliers
- manufacturers
- architect
- builder
- local council

Images may include:

details of:

- load support
- loading transfer mechanisms
- tying positions

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Industry standards may include:

- Australian standards

RANGE STATEMENT

Calculations may include:

- international standards
- nail plate provider standards
- quantities of timber for trusses and/or frames and/or floors
- quantities of ancillaries and bracing
- costing of materials and labour

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3221B Rehabilitate tracks, quarries and landings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to establish rehabilitation requirements of tracks, quarries and landings and plan and carry out renovation operations. It also requires the establishment of run-off and drainage channels

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPICOT3221A Rehabilitate tracks, quarries and landings

Application of the Unit

Application of the unit

The unit involves rehabilitating tracks, quarries and landings in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify rehabilitation requirements	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>rehabilitating tracks, quarries and landings</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. <i>Relevant information</i> is obtained and reviewed, and restoration and revegetation requirements are identified</p> <p>1.4. Site is <i>inspected</i> and specific rehabilitation requirements are identified</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Plan rehabilitation operations	<p>2.1. Site <i>environmental protection measures</i> are followed in line with applicable legislation and regulations</p> <p>2.2. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>2.3. Site hazards are identified, assessed and controlled in line with OHS and site requirements</p> <p>2.4. Sequence of <i>rehabilitation operations</i> is determined</p>

ELEMENT**PERFORMANCE CRITERIA**

- to ensure that time is used efficiently and residual equipment damage is minimised
- 2.5.Rehabilitation operations are checked for safe working conditions and planned in line with OHS, environmental care principles and site procedures
3. Rehabilitate tracks, quarries and landings
- 3.1.Nearby personnel are advised of impending equipment operation in line with OHS requirements and site procedures
- 3.2.Equipment is operated in line with manufacturer recommendations and performance is monitored to ensure efficiency and safety of operations
- 3.3.Materials no longer required and recoverable timber and equipment are identified and *removed* in line with site procedures
- 3.4.Tracks, quarries and landings are *renovated* in line with rehabilitation plan, work order and site procedures
- 3.5.Run-off and drainage channels are established to approximate natural drain lines in line with rehabilitation plan
- 3.6.Renovation outcomes are recorded and reported in line with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment; recognise common diseases, pests and nutritional deficiencies; rehabilitate tracks, quarries and landings over the required range of site and weather conditions, terrain and restoration requirements
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and bodies/groups external to the organisation
- Literacy skills sufficient to record and report workplace information; maintain documentation; read and interpret written material and complex information, including charts, tables and weather maps

REQUIRED SKILLS AND KNOWLEDGE

- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for rehabilitating tracks, quarries and landings
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for rehabilitating tracks, quarries and landings
- Environmental risks and hazards
- Using material effectively and efficiently
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and effectively establish rehabilitation requirements and plan and carry out the renovation of tracks, quarries and landings within applicable regulatory and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to rehabilitating tracks, quarries and landings
- following organisational policies and procedures relevant to rehabilitating tracks, quarries and landings
- establishing restoration and revegetation requirements and planning rehabilitation operations of tracks, quarries and landings
- safely and efficiently using equipment to renovate tracks, quarries and landings and establish run-off drainage channels

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required

RANGE STATEMENT

- actions relating to forest fire
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements may include:**
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Rehabilitating tracks, quarries and landings:**
- may be conducted at forest harvesting site after logging is completed
 - includes rehabilitation of both landing and tracks over a range of designs and conditions typical of logging requirements in the local

RANGE STATEMENT

- area
- will be carried out over the full range of operational weather conditions
 - instructions for the rehabilitation of tracks, quarries and landings
- Work order** is to include:
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - managers
 - external authorities
- Relevant information** may include:
- harvesting plans
 - environmental requirements
 - applicable forest practices, codes and management/site instructions
- Inspection** of site includes:
- determining impacts of harvesting or other operations
 - identifying natural water flow/water courses
 - checking for recoverable logs and equipment
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Environmental protection measures** may include:
- ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope

RANGE STATEMENT

- Equipment** may include:
- soil and water protection
 - ground hazards and obstacles
 - wheeled or tracked
- and may be:
- dozer
 - front end loader
 - skidder
 - grader using bucket or blade attachments
- Rehabilitation operations include:**
- returning the environment to its original or near to original condition
 - minimising the impact on the environment through the rehabilitation process
- Removed** may include:
- recycling materials and recoverable timber no longer required
 - re-using materials and recoverable timber no longer required
 - redirecting materials no longer required for energy recovery
- Renovated** may include:
- pulling out and removing construction materials
 - breaking up ramps and constructions
 - filling and ripping surfaces
 - breaking up and burying crushed rock, sand and other stabilising materials
 - spreading and compacting top soil over base materials

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3222B Present forestry information and interpretations programs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to deliver forestry information and interpretations programs to a range of client groups. The unit includes evaluation of program outcomes

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3222A Present forestry information and interpretations programs

Application of the Unit

Application of the unit

The unit involves presenting forestry information and interpretations programs in a range of work environment settings

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan information and interpretations programs	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to presenting forestry <i>information and interpretations programs</i> are identified and followed</p> <p>1.2. Suitable <i>activities</i> are identified and assessed against existing programs and organisational priorities</p> <p>1.3. Necessary approvals are obtained from <i>appropriate personnel</i> and <i>resources</i> are organised in line with organisational procedures</p> <p>1.4. Promotional material is developed in a format suitable for dissemination to target <i>participants</i> in line with program timeframes</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Conduct information and interpretations programs	<p>2.1. Information and interpretations programs are conducted to meet identified objectives that are suitable to the size and nature of target participants</p> <p>2.2. Particular needs of participants are catered for in the design and delivery of programs in line with organisational procedures</p> <p>2.3. Appropriate presentation <i>methods</i>, equipment and materials are used to enhance participant interest and</p>

ELEMENT	PERFORMANCE CRITERIA
3. Evaluate presentations	<p>involvement</p> <p>2.4. Problems are identified and resolved promptly in line with organisational procedures</p> <p>3.1. Program presentation is monitored and evaluated in line with organisational procedures</p> <p>3.2. Feedback is collected and analysed against program objectives in line with organisational procedures</p> <p>3.3. Materials and format used are evaluated and results documented in line with organisational procedures</p> <p>3.4. Program processes are <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use a range of presentation equipment and materials
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others; negotiate and liaise with internal and external bodies and groups; research and present information orally and in writing to a wide range of individuals and groups
- Literacy skills sufficient to record and report workplace information; maintain documentation; collate and assess information against specified criteria; prepare and edit explanatory material for the general public
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for presenting forestry information and interpretations programs
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the safe use and storage of chemicals, the minimisation of carbon emissions, the cleaning of plant, tools and equipment, and returning the environment to its original or near to original

REQUIRED SKILLS AND KNOWLEDGE

condition on completion of activity

- Organisational and site standards, requirements, policies and procedures for presenting forestry information and interpretations programs
- Environmental risks and hazards
- Criteria for recycling and re-using timber or material with defects or sub-standard timber or material
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Media relations and marketing principles and processes
- Recognition of participant characteristics, including language and literacy and numeracy skills, cultural background, and previous experience
- Appropriate training locations within a workplace
- Computer-based presentation techniques and tools
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently identify suitable activities and deliver information and interpretations programs to a wide range of clients

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or

EVIDENCE GUIDE

territory legislative and regulatory requirements and codes of practice relevant to presenting forestry information and interpretations programs

- following organisational policies and procedures relevant to presenting forestry information and interpretations programs
- identifying suitable activities and delivering information and interpretations programs suitable to participant needs and program objectives
- evaluating and promoting information and interpretations programs and introducing improvements where necessary

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements may include:**
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Information and interpretations programs:**
- aim to enhance the understanding and skills of a range of clients for a range of purposes
 - reflect a wide knowledge of forest growing and management resources and practices
- Activities may include:**
- seminars
 - talks

RANGE STATEMENT

- lectures
 - information in in-house publications
 - exhibitions
 - media releases
 - technology-based training
 - skills-based training
 - marketing and promotional programs
 - senior management representatives
 - client group representatives
 - technical specialists within the organisation
 - internal education
 - training and development staff
 - outside experts
- Appropriate personnel** may include:
- venue
 - equipment
 - materials
 - tools
- Resources** may include:
- people at any level in the organisation who operate within or for the forest
 - people outside the organisation who operate within or for the forest
 - people affected by organisational decisions or actions
 - people to whom the organisation should provide such a service to meet public and social accountability requirements
 - school children
 - people with an interest in the forest
- Participants** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Communication** may include:
- formal or informal
 - on-the-job or off-the-job, and may include incorporation in induction programs and
- Methods** may be:

RANGE STATEMENT

Records and reports may relate to:

- documentation
- training in the use of forest growing and management services and tools
- advertising in newsletters
- briefing sessions and seminars
- leaflets, booklets and 'how to' guides
- computer-based presentations
- technology-based training
- presentation notes
- participant attendance
- venue hire and catering
- equipment
- budget

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3223B Grade and mark logs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to evaluate, grade and mark logs for segregation to achieve best end use

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPICOT3223A Grade and mark logs

Application of the Unit

Application of the unit

The unit involves grading and marking logs in a range of work environment settings

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to evaluate logs	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>grading and marking</i> logs are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.4. Standards, specifications and lengths of <i>timber products</i> are identified and assessed for potential usage purposes</p> <p>1.5. Log and wood <i>characteristics</i> are checked and logs to be graded and recovered are identified</p> <p>1.6. Log grading and marking operations are checked for <i>safe working conditions</i> and planned in line with site procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Evaluate and mark logs	<p>2.1. Grading and marking operations are conducted in line with work order, and environmental and OHS requirements</p> <p>2.2. Log species is identified and <i>assessed</i> for suitability against standard industry specifications</p> <p>2.3. Defects are identified and assessed for suitability against product specifications</p> <p>2.4. Log is evaluated, graded and directed to best end use in line with specifications and site segregation code</p> <p>2.5. Log is clearly and accurately marked for grading or</p>

ELEMENT	PERFORMANCE CRITERIA
3. Complete grading and marking of logs	<p><i>cutting</i> in line with site segregation code</p> <p>2.6.Logs that cannot be safely processed by own personal skill are marked and reported in line with site procedures</p> <p>3.1.Logs are <i>measured</i> and data recorded clearly and accurately in line with industry standards</p> <p>3.2.Feedback on grading outcomes is received from appropriate personnel and queries are resolved using suitable interpersonal skills</p> <p>3.3.Grading and marking results are <i>recorded and reported</i> in line with site procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to select, use and maintain appropriate tools and equipment; efficiently and safely grade and mark logs for segregation; grade and segregate logs on the basis of species, size and characteristics across the full range required; identify and calculate log defects; optimise recovery to grade
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to select appropriate mathematical processes to accurately measure logs
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for grading and marking logs
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for grading and marking logs

REQUIRED SKILLS AND KNOWLEDGE

- Environmental risks and hazards
- Criteria for recycling and re-using timber with defects
- Using material effectively and efficiently
- Appropriate mathematical procedures for estimation and measurement
- Industry standards for log species, size and characteristics across the full range, and defects and length dimensions
- Procedures to grade and mark logs for segregation, including segregation codes
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently evaluate, grade and mark logs for segregation in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to grading and marking logs
- following organisational policies and procedures relevant to grading and marking logs
- safely and efficiently evaluating, grading and marking logs for segregation

EVIDENCE GUIDE

Context of and specific resources for assessment

- estimating and measuring logs and log defects
- identifying requirements for log usage and grade, and determining log grade or potential grade
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- specific grading requirements
- circumference
- weight
- diameter and volume of logs
- cutting and de-peeling logs
- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection

Organisational requirements may include:

Grading and marking may include:

Environmental protection measures may include:

RANGE STATEMENT

- Work order** is to include:
- ground hazards
 - obstacles
 - details of logs to be:
 - evaluated
 - graded
 - marked
- and may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** is limited to:
- log graders
- and may include:
- supervisors
 - clients
 - colleagues
 - managers
- Timber products** may include:
- logs
 - debarked logs
 - poles
 - piles
 - girders
 - veneer
 - graded sawlog
 - fencing products
 - non-graded sawlog
 - pulp
- Characteristics** may include:
- species
 - pipe
 - open pipe
 - discontinuous and irregular shaped pipes
 - loose gum veins
 - gum pockets and rings
 - termites and grubs
 - hearts out of centre
 - brown stain
 - rot
 - punk
 - cork or pith

RANGE STATEMENT

- black borer
 - black heart
 - straight shakes
 - shakes in spiral grain
 - overgrowth and doze pockets
 - small log pipe allowance
 - length
 - non-allowable length defects
- Safe working conditions** will include:
- control of potential and existing risks and hazards
 - ensuring log stability during evaluation, grading and marking processes
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Assessment:**
- is for the purpose of determining the best end use for logs
 - of defects may include determining allowable length defects involving limbs, multiple length defects, burn scars, bumps, swellings, kinks and bends, straight splits, spiral grain, and associated splits
 - of defects in sawlogs may include pipe and determining calculation using aids, including formulas, data tables, and hand-held programmable computers
- Cutting** may include:
- cross cutting to clarify grading decisions
- Measurement may include:**
- using callipers
 - using a measuring tool
- Records and reports** may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3224B Plan and monitor equipment maintenance

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to establish a routine maintenance plan and facilitate repairs for a range of equipment used in manufacturing operations

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3224A Plan and monitor equipment maintenance

Application of the Unit

Application of the unit

The unit involves planning and monitoring equipment maintenance in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------------|--|
| 1. Plan routine maintenance | <ul style="list-style-type: none"> 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to planning and monitoring <i>equipment maintenance</i> are identified and followed 1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations 1.3. Servicing requirements of all site equipment are reviewed and maintenance schedules prepared 1.4. Tools, equipment and material requirements for maintenance work are determined and organised 1.5. <i>Maintenance procedures</i> are planned, scheduled and communicated to <i>appropriate personnel</i> 1.6. Roles and responsibilities are assigned to personnel in line with individual competence 1.7. Mentoring and training to support the maintenance plan are provided as required to ensure procedures are correctly carried out 1.8. Maintenance processes are <i>planned</i> in line with site procedures and environmental requirements, and modified as required in response to equipment, personnel and site condition changes 1.9. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Monitor equipment operation | <ul style="list-style-type: none"> 2.1. Work is conducted in line with work order, and environmental and OHS requirements 2.2. Site servicing and maintenance records are routinely checked and reviewed for completeness and |

ELEMENT**PERFORMANCE CRITERIA**

- abnormal activity
- 2.3. Stock levels of *routine service items* and minor repair components are maintained to maximise availability and optimum operational performance of equipment
- 2.4. Equipment operation is systematically monitored, operating faults are identified and appropriate *action is taken*
- 2.5. Abnormal operation or frequent and recurring breakdowns are identified and investigated, and maintenance is organised as required
- 2.6. Situations requiring expert advice are identified and specialist assistance is sought in line with site procedures
- 2.7. Equipment condition is routinely reviewed to ensure and maintain efficient operations
3. Facilitate equipment repair
- 3.1. Visual inspection and fault finding procedures are conducted in line with manufacturer recommendations
- 3.2. Faults, malfunctions or problems with equipment are diagnosed and reported in line with site procedures
- 3.3. *Equipment breakdowns are assessed* and *repair option* is selected and organised in line with site procedures
- 3.4. Movement of equipment to suitable repair site is organised in line with site procedures
- 3.5. Repair activity is monitored and modified as required in line with site procedures
- 3.6. Maintenance schedule is periodically reviewed and revised to maintain operational integrity
- 3.7. Equipment that cannot be repaired is *dealt with* in line with site procedures, manufacturer recommendations and environmental requirements
- 3.8. Maintenance *records and reports* are completed accurately and maintained in line with site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, equipment and materials; maximise equipment availability and minimise maintenance and repair costs
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation; interpret, apply and convey information in written, diagrammatic and verbal form
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to develop, modify and assign suitable checking and maintenance procedures; identify problems, equipment faults and breakdown causes; arrange appropriate repair options

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and monitoring equipment maintenance
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and monitoring equipment maintenance
- Environmental risks and hazards
- Using energy effectively and efficiently
- Problem identification and resolution strategies, including typical breakdown situations and available options for correction
- Types of tools and equipment, and procedures for their safe use and maintenance
- Range of site equipment and respective technical capabilities and limitations
- Routine maintenance requirements for range of site equipment
- Established communication channels and protocols
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently:

- plan and monitor maintenance requirements of a range of site equipment
- facilitate repairs in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to planning and monitoring equipment maintenance
- following organisational policies and procedures relevant to planning and monitoring equipment maintenance
- planning and monitoring equipment operation and establishing a routine maintenance and servicing plan
- efficiently performing or directing maintenance activities and facilitating the repair of equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Equipment** may include:
- sawmilling equipment
- Equipment maintenance:**
- covers stationary and mobile equipment typically used for forest harvesting operations
 - may be performed in a forest or workshop environment
- Environmental protection measures** may include:
- ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards and obstacles
- Maintenance procedures** include:
- visual inspections
 - pre-start checks
 - shutdown checks
 - filling procedures
 - service procedures
 - changing bearings, shafts and pulleys
 - removing and replacing parts or components
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - managers
 - equipment manufacturers
 - service agents
- Plans** include:
- equipment maintenance and repair needs
 - current operational conditions
 - current work patterns

RANGE STATEMENT

Communication may include:

- disposal of contaminants and waste
- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Routine service items may include:

- equipment structural features and attachments
- drive lines
- engine
- transmission
- final drives
- tracks
- wheels and tyres
- winch
- grapple systems
- electronics
- computer and cutting systems
- fuel
- engine oil
- coolant
- brake fluid
- hydraulic fluid
- transmission fluid

Action taken may include:

- stopping equipment immediately
- checking operational concerns in line with seriousness and site standards

Equipment breakdown assessment includes:

- nature
- cause
- seriousness
- likely repair requirements

Repair options

take account of:

- likely repair times
- access to service personnel
- permanency of repairs
- potential for further damage and personal

RANGE STATEMENT

- Dealing with** may include:
- injury
 - equipment demand
 - availability of alternatives
- Records and reports may be:**
- recycling equipment that cannot be repaired
 - sending equipment that cannot be repaired to landfill
 - manual
 - a computer-based system
 - another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3225B Mechanically stress grade timber

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to stress grade timber with mechanical stress graders and high speed mechanical graders to test boards for strength and durability against set classifications

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3225A Mechanically stress grade timber

Application of the Unit

Application of the unit

The unit involves mechanically stress-grading timber in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------|--|
| 1. Prepare for stress-grading | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to mechanically stress-grading timber are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>timber</i> to be <i>stress graded</i> is assessed and acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Stress-grading process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Stress grade timber | <p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Spray guns or branding rolls</i> are set up for use in line with site procedures and environmental requirements</p> <p>2.3. <i>Calibration</i> procedure is performed using <i>verification boards</i> and <i>grade thresholds</i> are set in</p> |

ELEMENT**PERFORMANCE CRITERIA**

- line with industry standards and site procedures
- 2.4. Grading process is performed automatically and material flow to the machine is monitored and adjusted
- 2.5. Machinery is monitored to ensure consistent grade marking and that appearance of boards meets industry standards
- 2.6. Samples for *independent testing* are withdrawn and prepared in line with testing procedures
- 2.7. Stress-grading process and equipment faults are *recorded and reported* to the appropriate personnel
3. Conduct operator maintenance
- 3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 3.2. *Photo-electric cells and reflectors* are regularly checked and cleaned
- 3.3. Spray guns or branding rolls are checked and refilled
- 3.4. Mechanical stress grade rollers, auto-feed and load pressure are adjusted and maintained
- 3.5. Stress-grading area is kept clear of dust, shavings and debris in line with OHS requirements and environmental requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely mechanically stress grade timber
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for mechanically stress-grading timber
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for mechanically stress-grading timber
- Environmental risks and hazards
- Mechanical stress-grading techniques
- Grading markings and standards
- Methods of visual inspection
- Characteristics of timber
- Stress-grading equipment calibration and grade thresholds
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently mechanically stress grade timber in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to mechanically stress-grading timber
 - following organisational policies and procedures relevant to mechanically stress-grading timber
 - mechanically stress-grading timber in readiness for storage and/or processing
 - setting stress-grading equipment calibrations and grade thresholds
 - conducting operator maintenance on mechanical stress-grading equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements may include:**
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order is to include:**
- instructions for the mechanical stress-grading of material
- and may include:
- type
 - width

RANGE STATEMENT

- length
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Timber may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- preservative treated timber

Stress-grading includes:

- mechanical methods of testing board strength and durability
- marking and classifying timber to a grade of quality

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

RANGE STATEMENT

Equipment is to include:

- procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- mechanical stress-graders or high speed mechanical graders
- spray guns
- branding rolls

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Pre-startup checks

are conducted to ensure:

- equipment has been set up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Spray guns and branding rolls

are used to mark timber automatically with grade-related dyes

Calibration

is the setting of the machine to the desired stress grade level using verification boards in line with industry standards

Verification boards

- are used to ensure the calibration is correct
- have been previously assessed as being accurate

Grade thresholds

are the variations between one grade level and another determining if a board is considered in the higher or lower grade

Independent testing

is the process of randomly selecting stress graded boards for independent testing, ensuring that enterprise calibrations and grade thresholds are

RANGE STATEMENT

accurate and that grades follow industry standards

Records and reports may include:

- stress-grading requirements
- product type
- size
- inspection information
- grading and marking outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Photo-electric cells and reflectors are sensory devices that calculate stress levels of boards

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3226B Shift forestry logs using trucks

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to drive log trucks to a forestry harvesting site, load logs on site, deliver logs to their intended destination, and unload the logs in line with organisational procedures and regulations

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPICOT3226A Shift forestry logs using trucks

Application of the Unit

Application of the unit The unit involves shifting forestry logs using trucks in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan log movement	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to shifting forestry logs using trucks are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type of <i>truck</i>, <i>ancillary equipment</i>, <i>accessories</i> and <i>configuration</i> to be operated are checked for serviceability in line with manufacturer specifications and statutory regulations</p> <p>1.4. Logging sites and <i>logs</i> to be transported are identified from schedules, work orders and harvesting site personnel</p> <p>1.5. Truck loads, transport routes and timing with harvesting personnel are planned and permits obtained to follow statutory road regulations and road conditions</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Load and unload truck	<p>2.1. Access is identified and manoeuvring approach planned for loading and unloading sites</p> <p>2.2. Condition of roads and tracks are monitored and unexpected ground, water, vegetation or other <i>environmental conditions</i> are reported to appropriate</p>

ELEMENT**PERFORMANCE CRITERIA**

- personnel
- 2.3.Truck and trailer are positioned to maintain load safety and security while loading occurs
 - 2.4.Logs are assessed for weight, diameter, length and grade
 - 2.5.**Log positioning equipment** is placed and checked or reset for planned loading
 - 2.6.Log loading is undertaken to ensure **load build** meets specifications, follows sequence and locations to minimise handling, stabilises the load and meets transport requirements
 - 2.7.Logs are secured with sufficient **securing devices** to satisfy safety, job and regulatory requirements
 - 2.8.Load is inspected after transport for log movement and logs only supported by binders or chains
 - 2.9.Safe unloading sequence is assessed and provisions are made to support logs that cannot be controlled when released
 - 2.10. Binders and chains are released in correct sequence for truck, trailer and load configuration
3. Transport logs
- 3.1.Load is checked and **trimmed** to ensure safe transport with overhang warning devices fitted to follow road regulations
 - 3.2.Engine is started with instruments and gauges monitored to ensure equipment operation is safe, in line with manufacturer specifications and safety rules
 - 3.3.Truck is operated and driven to manufacturer specifications and legislative requirements using **primary and subsidiary controls** as appropriate to conditions
 - 3.4.Logs are transported following planned or modified route with consideration for road surfaces and conditions
 - 3.5.Periodic load safety checks are conducted and load is **re-tensioned** in line with statutory requirements and road conditions
 - 3.6.Truck is monitored using gauges, warning devices and observation of performance to detect operating faults
 - 3.7.Log shifting process and truck operations, including faults, are **recorded and reported**
 - 3.8.Truck is parked to avoid site and equipment hazards, engine is shutdown and truck is secured in line with

ELEMENT	PERFORMANCE CRITERIA
	manufacturer specifications

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely shift forestry logs using trucks
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for shifting forestry logs using trucks
- Environmental protection requirements, including the safe disposal of waste material, and the minimisation of carbon emissions
- Organisational and site standards, requirements, policies and procedures for shifting forestry logs using trucks
- Environmental risks and hazards
- Using energy effectively and efficiently
- Applicable fall from heights regulations and compliance requirements
- Log shifting equipment and techniques
- Scheduling and routing procedures
- Truck and equipment capabilities and capacities
- Statutory road regulations
- Log loading and unloading methods
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently shift forestry logs using trucks in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to shifting forestry logs using trucks
- following organisational policies and procedures relevant to shifting forestry logs using trucks
- shifting forestry logs using trucks for production and output activities in line with enterprise requirements
- coordinating personnel to follow procedures for shifting forestry logs using trucks

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements

EVIDENCE GUIDE

Method of assessment

- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal

Organisational requirements

RANGE STATEMENT

may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for equipment allocation and usage
- location
- intended activity to designated personnel

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Truck may include:

- rigid or articulated timber trucks, including:
 - semi-trailers
 - jinkers
 - quad-dogs
 - B doubles
 - two-bay skeletal trucks

Ancillary equipment may include:

- safety fittings
- headache boards
- cab guards

Accessories may include:

- tools
- records

RANGE STATEMENT

- first aid kits
 - fire extinguishers
 - binders
 - chains
 - personal protective equipment
 - truck and trailer combination
- Configuration** is to include:
- Logs** are to include: assessment of:
- diameter range
 - curvature
 - faults
 - length
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Environmental conditions** may include:
- ground growth
 - canopy
 - general forest lean
 - fallen trees
 - ground slope
 - soil and water protection
 - ground hazards and obstacles
- Log positioning equipment** may include:
- bolsters
 - slippers
 - stanchions
 - chocks
- Load build** is to include:
- positioning of logs on truck so as to avoid:
 - uneven weight distribution
 - instability or uncontrolled collapse of the load during loading or unloading
 - overhang
 - requirements for trailer rigidity
 - turning clearance

RANGE STATEMENT

- projection above stanchions
 - crowning
 - weight distribution on truck and trailer axles
 - contact with bolsters, stanchions and other logs
- Securing devices** are to include:
- chains
 - binders
 - other tensioning devices
- Trimming** is the process of preparing the truck and load for safe transport
- Primary controls** may include:
- power
 - brakes
 - steering
 - speed
 - position
 - load reaction
 - gear selection
- Subsidiary controls** may include:
- differential lock
 - centre tyre inflation (CTI)
 - power dividers
- Re-tensioning** is to include:
- re-tightening of the chains, binders and other tensioning devices
- Records and reports** may include:
- scheduling and coordination outcomes
 - log movement
 - despatch outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3227B Receive and measure logs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to measure logs for length and diameter, as well as estimate and calculate log weight and volume. The unit includes weighing trucks, and receiving and recording log deliveries

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3227A Receive and measure logs

Application of the Unit

Application of the unit The unit involves receiving and measuring logs in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Estimate log weights and volumes	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to <i>receiving</i> and <i>measuring logs</i> are identified and followed</p> <p>1.2. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> <p>1.3. Type and quantity of material to be received is inspected and checked for potential hazards, obstructions and spillage in line with site procedures</p> <p>1.4. Length and average diameter of logs are measured</p> <p>1.5. Estimated log weights and volumes are calculated in line with <i>organisation formulas</i></p>
2. Check, estimate and record loads	<p>2.1. Trucks delivering loads are stopped, and <i>documents</i> and delivery records are checked</p> <p>2.2. Load height and stability are checked for compliance with OHS regulations</p> <p>2.3. Log species, size and quality acceptable for delivery are assessed</p> <p>2.4. Weight and volume of each log are calculated and recorded</p> <p>2.5. Processing of documentation and equipment faults are <i>recorded and reported</i> to the <i>appropriate personnel</i></p>

ELEMENT	PERFORMANCE CRITERIA
3. Weigh trucks	<p>3.1. <i>Gross weight</i> is measured using the <i>weighbridge</i> in line with statutory regulations</p> <p>3.2. Truck <i>tare</i> weight is obtained from existing records or need for weighing is noted</p> <p>3.3. Truck tare weight is measured on departure using the weighbridge in line with statutory regulations</p> <p>3.4. <i>Net weight</i> is calculated and recorded with type of logs delivered in line with site requirements</p>
4. Direct trucks for unloading	<p>4.1. Log yard personnel are notified of impending delivery and unloading requirements</p> <p>4.2. Trucks are directed to unloading area in line with log classification</p> <p>4.3. Truck movement is monitored and coordinated to ensure a safe operating environment</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely receive and measure logs
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and maintain information relating to receiving and measuring logs
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for receiving and measuring logs
- Environmental protection requirements, including the safe disposal of waste material, and the minimisation of carbon emissions
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

receiving and measuring logs

- Environmental risks and hazards
- Using energy effectively and efficiently
- Log truck operations and weighing
- Measurements and formulas for weights and volumes of logs
- Estimating procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently receive and measure logs in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to receiving and measuring logs
- following organisational policies and procedures relevant to receiving and measuring logs
- receiving and measuring logs and conveying material to loading areas
- weighing trucks to ensure they follow regulations

EVIDENCE GUIDE

Context of and specific resources for assessment

- estimating and calculating log weights and volume
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Receiving** is to include:
- delivery of logs to site
 - communicating with the log truck driver
 - checking documentation
 - checking and confirming the load
- Measuring logs:**
- is conducted using measuring equipment, such as measuring tapes
- and may include:
- electronic measuring equipment
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to

RANGE STATEMENT

	individual social and cultural differences
Organisation formulas may include:	<ul style="list-style-type: none">• control of tone of voice• enterprise set formulas and data tables used to estimate and calculate weights and volumes
Documents include:	<ul style="list-style-type: none">• weighbridge dockets• order dockets• delivery records• quality and accounting records• tally sheets• quality assurance forms• load manifests• payment instructions
Records and reports may include:	<ul style="list-style-type: none">• log truck operations• log types• size• inspection and labelling outcomes• storage locations• quality outcomes• hazards• incidents• equipment malfunctions
	and may be:
	<ul style="list-style-type: none">• manual• a computer-based system• other appropriate organisational communication system
Appropriate personnel may include:	<ul style="list-style-type: none">• supervisors• suppliers• clients• colleagues• managers
Gross weight	is the full weight of a truck, its load of logs, and any fuel it may be carrying
Weighbridge	is the device trucks drive onto to weigh their load and tare, where a weighing plate has been built into the section of road or bridge to provide a weight reading
Tare	is an allowance made for the weight of a truck

RANGE STATEMENT

Net weight without its fuel or load
is gross weight less tare

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3228B Plane/sand panels

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to plane and sand the surfaces of panels, optimising board thickness or retaining integrity of veneers

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3228A Plane/sand panels

Application of the Unit

Application of the unit The unit involves planing and sanding panels in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for planing and sanding	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to planing and sanding panels are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>panels</i> to be <i>planed or sanded</i> are acquired from the production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Planing or sanding process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Plane/sand panels	<p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Planing or sanding thickness and <i>feed rate</i> are set for optimal recovery of product</p> <p>2.3. Panel is positioned and fed at rate appropriate to the machine speed, capacity, <i>board</i> or <i>veneer</i> panel thickness and condition</p> <p>2.4. <i>Dust extraction</i> equipment is regularly checked and cleaned to avoid blockages</p> <p>2.5. Panels are <i>visually assessed</i> to ensure specified outcome has been achieved</p> <p>2.6. <i>Outfeed</i> is coordinated to ensure efficient <i>recovery</i></p>

ELEMENT	PERFORMANCE CRITERIA
	of planed or sanded material
	2.7. Planing or sanding process and equipment faults are recorded and reported to the appropriate personnel
3. Redistribute material	3.1. Panels are regraded in line with site requirements and industry standards
	3.2. Material is directed and moved to storage or processing operations in line with site requirements
	3.3. Sub-standard material is rejected and disposed of in line with site requirements
	3.4. Work area is cleaned in line with site requirements
4. Conduct operator maintenance	4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	4.2. Planer blades or sanding belts are checked for blunt or damaged condition in line with site procedures
	4.3. Planer blades or sanding belts are removed and replaced in line with manufacturer recommendations
	4.4. Machine area is kept clear of dust, shavings and debris in line with OHS and environmental requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely plane and sand panels
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planing and sanding panels
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), and the safe use and storage of chemicals
- Organisational and site standards, requirements, policies and procedures for planing and sanding panels
- Environmental risks and hazards
- Procedures for recycling and re-using sub-standard material
- Planing or sanding techniques
- Methods of visual inspection
- Characteristics of timber and veneer
- Distribution processes
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plane and sand panels in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant planing and sanding panels
 - following organisational policies and procedures relevant to planing and sanding panels
 - planing and sanding panels in readiness for application to panel products or for interim storage
 - redistributing material on site using designated equipment
 - conducting operator maintenance on planing and sanding equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and

RANGE STATEMENT

- carrying
- Environmental requirements may include:**
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order is to include:**
- instructions for planing or sanding boards or veneer panels
- and may include:
- species
 - colour
 - type

RANGE STATEMENT

- width
 - length
 - thickness
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Panel** is to include:
- any manufactured panel product with a timber veneer
 - any solid timber panels (single board or glue joined boards)
- Planing** is the process of dressing solid timber panels to a specified thickness, removing the rough surfaces and any imperfections
- Sanding** is the process of finishing a panel and removing any machine marks or imperfections to an acceptable standard of smoothness or surface texture, which will allow coating
- Equipment** is to include:
- procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source
- and may include:
- panel planers or thicknessers
 - surface planers or buzzers
 - drum sanders
 - panel sanders
 - veneer sanders
 - stroke sanders
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding

RANGE STATEMENT

- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Pre-startup checks

are conducted to ensure:

- machine has been set up correctly
- systems are performing accurately
- machine is operating to optimum performance

Feed rate is to include:

- rate of speed the board or veneered panel is passed through the planing/sanding machine
- impact on equipment
- finish and production output

Board refers to:

- solid timber panels

Veneer

- is the thin sheet of timber (approximately 0.5 mm thick or to organisational requirement for sliced veneer and varying thickness for rotary) used to cover medium density fibreboard, chipboard, fibreboard, plywood and other manufactured board products with a natural timber coating
- types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn

Dust extraction may include:

- machine specific dust extraction systems with collection bags
- hopper-based extraction systems that link all machines to the one extractor source through a series of connected pipes

Visually assessed is to include:

- assessment of boards or veneer boards to determine:
 - thickness
 - finish quality
 - veneer faults

Outfeed

is the process of producing panels from the machining operation and handling them in such a way that prevents damage to the planed or sanded surfaces

Recovery

- is the volume of timber planed or sanded from a resource compared to the volume of that resource

RANGE STATEMENT

Records and reports may include:

- is expressed as a percentage - $\frac{\text{planed/sanded timber volume}}{\text{initial timber volume}} \times 100$
- maximises the value of the resource
- planing or sanding requirements
- product type
- size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Regrading

is the process of visually inspecting panels to re-classify quality and use after planing/sanding has taken effect

On-site movement may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment, such as:
 - fork lifts
 - slings
 - trolley jacks
- gantry cranes
- loaders

assistance with lifting, such as:

- involving two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

- storage racks
- storage bays
- bins
- stacks

RANGE STATEMENT

- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material
- redirecting sub-standard material for energy recovery

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3229B Mechanically stress grade panels

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to mechanically stress grade panels with mechanical stress graders and high speed mechanical graders to test panels for strength and durability against set classifications

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3229A Mechanically stress grade panels

Application of the Unit

Application of the unit The unit involves mechanically stress-grading panels in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for stress-grading	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to mechanically stress-grading panels are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>panels</i> to be <i>stress graded</i> are assessed and acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Stress-grading process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Stress grade panels	<p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Spray guns or branding rolls</i> are set up for use in line with site procedures and environmental requirements</p> <p>2.3. <i>Calibration</i> procedure is performed using <i>verification panels</i> and <i>grade thresholds</i> set in line</p>

ELEMENT	PERFORMANCE CRITERIA
	with industry standards and site procedures
	2.4. Grading process is performed automatically and material flow to the machine is monitored and adjusted
	2.5. Machinery is monitored to ensure consistent grade marking and that appearance on panels meets industry standards
	2.6. Samples for <i>independent testing</i> are withdrawn and prepared in line with testing procedures
	2.7. Stress-grading process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. <i>Photo-electric cells and reflectors</i> are regularly checked and cleaned
	3.3. Spray guns or branding rolls are checked and refilled in line with site procedures
	3.4. Mechanical stress grade rollers, auto-feed and load pressure are adjusted and maintained
	3.5. Stress-grading area is kept clear of dust, shavings and debris in line with OHS and environmental requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently perform calibration procedures; prepare samples for testing
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for mechanically stress-grading panels
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for mechanically stress-grading panels
- Environmental risks and hazards
- Mechanical stress-grading techniques
- Grading markings and standards
- Methods of visual inspection
- Characteristics of panels
- Stress-grading equipment calibration and grade thresholds
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently mechanically stress grade panels in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy all, of the requirements of the elements of this unit and include

EVIDENCE GUIDE

competency in this unit

demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to mechanically stress-grading panels
- following organisational policies and procedures relevant to mechanically stress-grading panels
- mechanically stress-grading panels in readiness for storage and/or processing
- setting stress grade equipment calibrations and grade thresholds
- conducting operator maintenance on mechanical stress-grading equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required

RANGE STATEMENT

- actions relating to forest fire
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements may include:**
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order is to include:**
- instructions for the mechanical stress-grading of material
- and may include:
- type

RANGE STATEMENT

- width
 - length
 - thickness
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Panels** may include:
- laminated veneer
 - medium density fibreboard
 - chipboard
 - fibreboard
 - plywood
- Stress-grading** includes:
- mechanical methods of testing panel strength and durability
 - marking and classifying panels to a grade of quality
- Storage locations** may include:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position

RANGE STATEMENT

Equipment is to include:

- procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- mechanical stress graders or high speed mechanical graders
- spray guns
- branding rolls

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Pre-startup checks

are conducted to ensure:

- equipment has been set up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Spray guns or branding rolls

are used to mark panels automatically with grade-related dyes

Calibration

is the setting of the machine to the desired stress grade level using verification panels in line with industry standards

Verification panels:

- are used to ensure the calibration is correct
- have been previously assessed as being accurate

Grade thresholds

are the variations between one grade level and another determining if a panel is considered in the higher or lower grade

Independent testing

is the process of randomly selecting stress graded panels for independent testing, ensuring that enterprise calibrations and grade thresholds are

RANGE STATEMENT

accurate and that grades follow industry standards

Records and reports may include:

- stress-grading requirements
- product type
- size
- inspection information
- grading and marking outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system
- other appropriate organisational communication system

Photo-electric cells and reflectors are sensory devices that calculate stress levels of panels

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3230B Operate automated stacking equipment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to use automatic or semi-automatic stacking equipment to plan, build, monitor, strap and record packs of timber or timber products, preparing them for despatch

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3230A Operate automatic stacking equipment

Application of the Unit

Application of the unit The unit involves operating automatic stacking equipment in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| 1. Prepare for stacking | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to operating automatic stacking equipment are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>timber products</i> to be <i>stacked</i> are assessed and acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Stacking process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Automatically stack timber products | <p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Stacking machine is set up to produce planned pack sizes in line with manufacturer's specifications</p> <p>2.3. <i>Packs</i> are built using consistent material type, size and thickness</p> <p>2.4. <i>Bearers and protective strips</i> appropriate to pack</p> |

ELEMENT**PERFORMANCE CRITERIA**

- type are checked for consistent thickness and damage, and then placed squarely, evenly and consistently
- 2.5. Stacked material is monitored for grade and quality, with unacceptable components removed and reprocessed
- 2.6. Unacceptable components that cannot be reprocessed are *disposed of* in line with site procedures and environmental requirements
- 2.7. Packs are stacked to correct material count or dimension and checked to be safely stacked in line with site requirements
- 2.8. Packs are *strapped, wrapped and tagged or labelled*
- 2.9. Strapping, wrapping, tagging and labelling waste material is minimised and *dealt with* in line with site procedures and environmental requirements
- 2.10. Stacking process and equipment faults are *recorded and reported* to the appropriate personnel
3. Conduct operator maintenance
- 3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 3.2. Automatic stacking machine mechanisms are checked, maintained and cleaned
- 3.3. Stacking area is kept clear of dust, off-cuts and debris in line with OHS and environmental requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate automatic stacking equipment; efficiently and safely build packs
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation

REQUIRED SKILLS AND KNOWLEDGE

- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating automatic stacking equipment
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), and the minimisation of carbon emissions
- Organisational and site standards, requirements, policies and procedures for operating automatic stacking equipment
- Environmental risks and hazards
- Using energy effectively and efficiently
- Automatic stacking techniques
- Procedures for building and stacking packs safely and to requirement
- Grading markings and quality standards
- Pack weight and dimensions
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently operate automatic stacking equipment in line

EVIDENCE GUIDE

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>with organisational requirements</p> <p>The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to operating automatic stacking equipment • following organisational policies and procedures relevant to operating automatic stacking equipment • operating automatic stacking equipment in readiness for despatching packs • setting automatic stacking equipment parameters • conducting operator maintenance on automatic stacking equipment
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills • Assessment methods must confirm the ability to access and correctly interpret and apply the required

EVIDENCE GUIDE

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements may include:**
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

Work order is to include:

- instructions for the automatic stacking of material

and may include:

- type
- width
- length
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Timber products may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber and preservative treated timber
- laminated veneer
- chipboard
- fibreboard, including medium density fibreboard
- plywood

Stacking

is the process of building up a pack of timber products from the ground up, to the specified number of products or pack dimensions

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

RANGE STATEMENT

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment is to include:

- procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- automatic and semi-automatic stacking machines

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Pre-startup checks are conducted to ensure:

- equipment has been set up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Packs

are the completed sets of timber or timber products, which have been stacked and strapped to meet work order requirements and are ready for despatch

Bearers and protective strips:

- are used to set the timber products on
- provide spacing where necessary
- provide protection from strapping

Disposing of may include:

- recycling unacceptable components that cannot be reprocessed

RANGE STATEMENT

- Strapping** may include:
- re-using unacceptable components that cannot be reprocessed
 - redirecting unacceptable components that cannot be reprocessed for energy recovery
 - securing bundles with metal or plastic straps
 - tightening and tensioning, using hand-held equipment to prevent slippage, strap breakage and damage to products

Wrapping is the process of placing plastic sheeting over packs of material to protect them from weather and transport damage

- Tagging and labelling** may include:
- client identification
 - destination
 - address
 - contents
 - special instructions
 - handling instructions

- Dealing with** may include:
- recycling strapping, wrapping, tagging and labelling waste material
 - sending strapping, wrapping, tagging and labelling waste material to waste

- Records and reports** may include:
- automatic stacking requirements
 - product type
 - size
 - inspection information
 - grading and marking outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3231B Operate steam boiler

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to start up, operate, shut down and store a steam-generating boiler, including tasks associated with handover, maintenance, inspection and safety

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3231A Operate steam boiler

Application of the Unit

Application of the unit

The unit involves operating a steam boiler in a timber treatment plant setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------|---|
| 1. Prepare for operation | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to operating a steam boiler are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Quantity of <i>steam</i> to be generated is assessed and set for the allocated process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Steam generation is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Operate and monitor boiler | <p>2.1. Pre-operational safety and <i>pre-startup checks</i> are carried out on equipment in line with statutory requirements, manufacturer recommendations and plant operating procedures</p> <p>2.2. Boiler is started and brought safely on line and recent boiler performance is clearly communicated to other personnel</p> <p>2.3. Continued operation of boiler is assessed against pre-operational checks, maintenance requirements and operating conditions</p> <p>2.4. Boiler operation and status are monitored and</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Shut down and store boiler	<p data-bbox="619 293 1259 365"><i>diagnosed</i> and adjustments conducted to maintain safe and efficient operation</p> <p data-bbox="576 376 1246 483">2.5.<i>Boiler house</i> chemicals are stored, recorded and handled in line with statutory and environmental requirements</p> <p data-bbox="576 495 1262 566">2.6.<i>Emergency shutdown</i> procedures are followed in case of a fire</p> <p data-bbox="576 577 1278 685">2.7.Fuel efficiency recordings, calculations, operating log, boiler operation and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p> <p data-bbox="576 696 1278 770">3.1.Shutdown and lock-out procedures are followed in line with OHS legislation and statutory regulations</p> <p data-bbox="576 781 1230 855">3.2.Condition of boiler is checked and maintenance requirements are recorded and reported</p> <p data-bbox="576 866 1305 974">3.3.Boiler is prepared for inspection process, with valves and fittings removed, in line with statutory requirements</p> <p data-bbox="576 985 1246 1059">3.4.Boiler is cleaned internally and externally in line with statutory and environmental requirements</p> <p data-bbox="576 1070 1267 1144">3.5.Mode of <i>storage</i> is selected and boiler is stored in line with statutory requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate a steam boiler
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a steam boiler
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a steam boiler
- Environmental risks and hazards
- Using energy effectively and efficiently
- Steam boiler operating procedures
- Characteristics and dangers of steam
- Procedures for assessing, diagnosing and testing boilers
- Startup and shutdown procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently operate a steam boiler in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to operating a steam boiler
 - following organisational policies and procedures relevant to operating a steam boiler
 - starting, operating, monitoring and shutting down a steam boiler in line with statutory requirements and standard operating procedures
 - handing over operation of a steam boiler to other personnel
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred

EVIDENCE GUIDE

to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

RANGE STATEMENT

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

instructions for:

- steam generation
- quantity
- time-span

and may include:

- instructions for the environmental monitoring

RANGE STATEMENT

- Appropriate personnel** may include:
- of work and procedures
 - environmental care requirements relevant to the work
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Steam** is energy derived from boiling water creating expansion within the boiler and therefore pressure
- Equipment** is to include:
- steam-generating boilers, including:
 - liquid or vapour restricted to water or steam
 - fuel and fuel supply system
 - boiler operations in conjunction with other plant
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Pre-startup checks** are conducted to ensure:
- equipment has been set up correctly
 - systems are performing accurately
 - equipment is operating to optimum performance
- Diagnosis** is to include:
- use of:
- audio
 - visual
 - written information
- together with:
- water quality
 - chemical testing

RANGE STATEMENT

- Boiler house** is normally the isolated room or building where the boiler is located
- Emergency shut down** is the immediate shutting off of the equipment to prevent an accident or prevent damage to the machine or product
- Records and reports** may include:
- fuel efficiency recordings
 - calculations
 - operating logs
 - storage location
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system
- Storage** is to include:
- close down time the boiler is inactive
 - procedures for shutdown

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3232B Operate heat plant

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to start up, operate, shut down and store an energy producing heat plant, including tasks associated with handover, maintenance, inspection and safety

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3232A Operate heat plant

Application of the Unit

Application of the unit

The unit involves operating a heat plant in a timber treatment plant setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------------|---|
| 1. Prepare for operation | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to operating a heat plant are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Quantity of <i>energy</i> to be generated is assessed and set for the allocated process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Heat generation is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Operate and monitor heat plant | <p>2.1. Pre-operational safety and <i>pre-startup checks</i> are carried out on equipment in line with statutory requirements, manufacturer recommendations and plant operating procedures</p> <p>2.2. Plant is started and brought safely on line and recent heat plant performance is clearly communicated to other personnel</p> <p>2.3. Continued operation of heat plant is assessed against pre-operational checks, maintenance requirements and operating conditions</p> <p>2.4. Heat plant operation and status are monitored and</p> |

ELEMENT**PERFORMANCE CRITERIA**

- diagnosed* and adjustments conducted to maintain safe and efficient operation
- 2.5. *Emergency shutdown* procedures are followed in case of a fire or likelihood of fire
- 2.6. Fuel efficiency recordings, calculations, operating log, plant operation and equipment faults are *recorded and reported* to the appropriate personnel
3. Shut down and store heat plant
- 3.1. Shutdown and lock-out procedures are followed in line with OHS legislation and statutory regulations
- 3.2. Condition of heat plant is checked and maintenance requirements are recorded and reported
- 3.3. Heat plant is prepared for inspection process, with valves and fittings removed, in line with statutory requirements
- 3.4. Heat plant is cleaned internally and externally in line with statutory and environmental requirements
- 3.5. Mode of *storage* is selected and plant is stored in line with statutory requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate a heat plant
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of

REQUIRED SKILLS AND KNOWLEDGE

processes for operating a heat plant

- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a heat plant
- Environmental risks and hazards
- Using energy effectively and efficiently
- Heat plant operating procedures
- Characteristics and dangers of heat and energy
- Assessing, diagnosing and testing heat plants
- Startup and shutdown procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently operate a heat plant in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to operating a heat plant

EVIDENCE GUIDE

- following organisational policies and procedures relevant to operating a heat plant
 - starting, operating, monitoring and shutting down a heat plant in line with statutory requirements and standard operating procedures
 - handing over operation of a heat plant to other personnel
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency

EVIDENCE GUIDE

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for heat generation, quantity and time-span

and may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients

RANGE STATEMENT

- colleagues
- managers

Energy

is derived from boiling water, creating heat and expansion within the plant and therefore pressure or energy

Equipment is to include:

- energy generating heat plants

and may include:

- thermal oil heating systems
- gas burners
- dust systems, including extraction
- solid fuel systems
- steam generators
- fuel intake
- water intake
- oil flow (pump operation)
- hydraulic systems
- blowing down steam generators

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Pre-startup checks

are conducted to ensure:

- equipment has been set up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Diagnosis is to include:

use of (together with fuel testing):

- audio
- visual
- written information

Emergency shutdown

is the immediate shutting off of the equipment to prevent an accident or damage to the machine or

RANGE STATEMENT

product

- Records and reports** may include:
- fuel efficiency recordings
 - calculations
 - operating logs
 - storage location
 - quality outcomes manual
 - hazards
 - incidents
 - equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Storage is to include:

- close down time the heat plant is inactive
- procedures for shutdown

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3233B Sharpen and align blades and knives

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to sharpen and align a range of straight and angled blades and knives for a variety of machines that use either babbitting or set screw processes for positioning knives and blades in disc chippers, canters, chipping heads and/or reducers

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3233A Sharpen and align blades and knives

Application of the Unit

Application of the unit

The unit involves sharpening and aligning blades and knives in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare blades and knives for sharpening	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to sharpening and aligning <i>blades and knives</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type of blade or knife to be <i>sharpened</i> is removed from the designated machinery</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Sharpening and <i>aligning</i> process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Assess condition and set up blades or knives and assemblies	<p>2.1. <i>Cutting performance</i> of blade or knife is assessed to determine sharpening requirements</p> <p>2.2. Condition of <i>knife holder</i>, jig and chuck is assessed and defects are corrected</p> <p>2.3. Knife holder is cleaned and secured to the chuck to enterprise standards</p> <p>2.4. Jig type and setting are selected for required blade or</p>

ELEMENT	PERFORMANCE CRITERIA
3. Sharpen blades and knives	<p data-bbox="620 293 762 329">knife setup</p> <p data-bbox="576 344 1286 416">3.1. Pre-startup checks are carried out on equipment in line with site requirements</p> <p data-bbox="576 432 1294 539">3.2. Blades or knives are cleaned of excess build-up and babbitts and inspected for defects, with those unable to be repaired by sharpening replaced</p> <p data-bbox="576 555 1230 618">3.3. Geometry for blades or knives is selected from manufacturer's instructions</p> <p data-bbox="576 633 1238 741">3.4. Grinder is set up with suitable attachment for holding the knife or blade and grinding wheel is examined and dressed</p> <p data-bbox="576 757 1286 819">3.5. Grinding wheel speed and feeds are selected to suit the wheel and the blade or knife</p> <p data-bbox="576 835 1311 943">3.6. Grinding wheel is fed across and into cutting edge to obtain clean cutting edge to conform to geometric requirements without defects and burns</p> <p data-bbox="576 958 1193 1021">3.7. Coolant is applied in line with manufacturer specifications</p> <p data-bbox="576 1037 1286 1144">3.8. Blade or knife is inspected after sharpening for accuracy and remaining burrs are honed to obtain a sharp cutting edge</p> <p data-bbox="576 1160 1294 1290">3.9. Blades and knives that cannot be sharpened or are damaged in the sharpening process are dealt with in line with site procedures, manufacturer recommendations and environmental requirements</p> <p data-bbox="576 1305 1278 1368">3.10. Sharpening and equipment faults are recorded and reported to the appropriate personnel</p>
4. Align blades and knives	<p data-bbox="576 1391 1286 1462">4.1. Babbitts are inspected to assess the requirement for reconditioning</p> <p data-bbox="576 1478 1222 1541">4.2. Babbitt material is heated to required pouring temperature</p> <p data-bbox="576 1556 1302 1664">4.3. Blade or knife is set up in pouring jig to required dimensions and babbitt is poured without excessive material wastage and avoiding cavities and shrinkage</p> <p data-bbox="576 1680 1294 1742">4.4. Assembly is cooled and excess material removed to allow correct positioning in machinery</p> <p data-bbox="576 1758 1294 1865">4.5. Set screws are inspected in line with standard operating procedures, and bent or broken screws are replaced</p> <p data-bbox="576 1881 1294 1944">4.6. Set screws are adjusted to position knife or blade at the correct depth</p> <p data-bbox="576 1960 1302 1986">4.7. Set screws are locked into position to avoid knife or</p>

ELEMENT **PERFORMANCE CRITERIA**

blade movement

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; set up grinder and all attachments to suit knife or blade type; efficiently and safely sharpen blades and knives to enterprise requirements
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sharpening and aligning blades and knives
- Environmental protection requirements, including the safe disposal of waste material, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sharpening and aligning blades and knives
- Environmental risks and hazards
- Characteristics of metal, blades and knives
- Sharpening methods and geometry
- Aligning methods and settings
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently sharpen and align blades and knives in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to sharpening and aligning blades and knives
- following organisational policies and procedures relevant to sharpening and aligning blades and knives
- removing and replacing babbitts and set screws in line with standard operating procedures and machine settings
- pouring babbitts to site procedures and finishing standard
- removing and replacing set screws in line with site procedures and machine requirements

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE

Method of assessment

- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised**

RANGE STATEMENT

wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role

RANGE STATEMENT

and responsibility

- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Blades and knives may include:

- chipper and canter/reducer knives
- planer and thicknesser blades
- spindle moulder knives
- guillotine blades
- all other types of blades or knives that can be sharpened through a parallel grinding process

Work order is to include:

- instructions for sharpening and aligning blades and knives in designated equipment

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Sharpening

is the angle, depth of cut, and speed that the knife or blade passes over the grinding wheel to obtain a sharp edge and required surface finish

Equipment is to include:

- procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- grinding machines and babbitt making

RANGE STATEMENT

equipment, such as melting pots

Alignment

is the process of setting blades or knives so that all blades and knives sit at the same angle and height in relation to the abrasive wheel

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Cutting performance

is how the knife or blade performs in relation to production expectations

Knife holder

is the assembly that houses the knife when positioned on the machine chuck during sharpening

Pre-startup checks

are conducted to ensure:

- machine has been set up correctly
- systems are performing accurately
- machine is operating to optimum performance

Babbitts

are the spacers that extend from the backs of knives and blades to determine knife extension and position in relation to the disc or knife holder in the machine

Defects may include cutting edges with:

- burrs
- burns
- chips
- splits
- dents

Geometry is to include:

- angle that a knife or blade is sharpened at allowing for the device the knives or blades are in and the material they will be cutting

Grinder attachments are to include:

- grinder mounted tables or blade holders:
 - with or without clamps
 - with or without automatic feed

RANGE STATEMENT

Wheel speed	is the speed at which the grinding wheel rotates - too fast and it may burn the metal, too slow and it may produce a rough finish or grab the knife or blade
Coolant	is used in conjunction with grinding operations to cool the metal blade or knife as it generates heat from the sharpening process
Burrs	<ul style="list-style-type: none">• are thin raised sections of metal that extend from the cutting edge• must be removed through a honing process before the knife or blade commences cutting
Dealing with may include:	<ul style="list-style-type: none">• recycling blades and knives that cannot be sharpened or are damaged in the process and cannot be repaired• sending blades and knives that cannot be sharpened or are damaged in the process and cannot be repaired to waste
Records and reports may include:	<ul style="list-style-type: none">• knife or blade type and size• inspection information• grading and labelling outcomes• storage locations• quality outcomes• hazards• incidents• equipment malfunctions and may be: <ul style="list-style-type: none">• manual• a computer-based system• other appropriate organisational communication system
Reconditioning	is the process of removing, melting and re-pouring babbitt material to the correct width, length and thickness
Pouring temperature	is the temperature at which the molten babbitt metal can be poured into a mould without solidifying at an early stage of the babbitt forming process
Set screws	are the spacers that extend from the backs of knives and blades to determine knife and blade

RANGE STATEMENT

extension and position in relation to the disc or
knife holder in the machine

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3234B Cut material using CNC sizing machines

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to set up, operate and maintain computer numerically controlled (CNC) sizing machines used for the production of panels and components. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3234A Cut material using CNC sizing machines

Application of the Unit

Application of the unit

The unit involves cutting material using CNC sizing machines in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------|--|
| 1. Prepare for cutting | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to cutting material using CNC sizing machines are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be <i>cut</i> is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Material cutting process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Set up machine | <p>2.1. <i>CNC program</i> is set to job specifications</p> <p>2.2. Safety equipment, including emergency stops, gauges, guards and controls, is checked</p> <p>2.3. <i>Machine settings</i> and adjustments are made in line with job requirements and manufacturer's instructions</p> <p>2.4. Machine and cutting mechanisms are checked for</p> |

ELEMENT**PERFORMANCE CRITERIA**

- safe and effective operation
- 2.5. Trial runs are conducted to check machine operation, accuracy and quality of finished work
- 2.6. Final adjustments are made to the CNC programs and equipment in line with workplace procedures
- 2.7. Successful trial runs are included in the process and unsuccessful trial runs are *disposed of* in line with site procedures and environmental requirements
3. Operate machine
- 3.1. *Pre-startup checks* are carried out on equipment in line with site requirements
- 3.2. Material is fed into machine in line with manufacturer's instructions, safe handling procedures and standard workplace operating procedures
- 3.3. Machine is operated in line with its designed capacity and purpose, tooling requirements and manufacturer recommendations
- 3.4. Machine operation is monitored to ensure product quality and *output*
- 3.5. *Waste* quantities are checked and minimised
- 3.6. Items that do not meet quality requirements are repaired or disposed of in line with workplace procedures
- 3.7. Cutting process and equipment faults are *recorded and reported* to the appropriate personnel
4. Conduct operator maintenance
- 4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 4.2. Blades are checked for blunt or damaged condition in line with site procedures
- 4.3. Blades are removed and replaced in line with manufacturer recommendations
- 4.4. Removed blades are *dealt with* in line with site procedures, manufacturer recommendations and environmental requirements
- 4.5. Cutting area is kept clear of dust, off-cuts and debris in line with OHS and environmental requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely use CNC sizing machines to cut material
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for cutting material using CNC sizing machines
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for cutting material using CNC sizing machines
- Environmental risks and hazards
- Criteria for recycling and re-using unsuccessful trial runs/items that do not meet quality requirements
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of timber, timber products and defects
- Setup and operation of CNC equipment
- Cutting patterns and sequences
- Methods for assessing condition of blades
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently cut materials using CNC sizing machines according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to cutting material using CNC sizing machines
- following organisational policies and procedures relevant to cutting material using CNC sizing machines
- cutting materials using CNC equipment in line with the work order and within prescribed organisational tolerances
- setting computer programs for the CNC equipment to follow
- conducting operator maintenance on CNC equipment
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Context of and specific resources for assessment

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the cutting and despatch of timber and timber products from the work site

and may include:

- type
- size
- length
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board products
- coated and/or treated timber products
- beams, including laminated beams

RANGE STATEMENT

Cutting is to include:

- sawing operations with CNC equipment

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment is to include:

- CNC beam saws
- procedures for lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- CNC double end profiling machines

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

CNC program

is the computer-generated program selected by the operator (sub-programs, parametric performance of CAM functions, downloading and storage of

RANGE STATEMENT

data), which translates into the CNC equipment operating automatically to fulfil its programmed instructions

Machine settings may include:

- measuring and setting equipment to:
 - stops
 - fences
 - angles
 - depths
 - feeds
 - speeds

Disposing of may include:

- recycling unsuccessful trial runs/items that do not meet quality requirements
- re-using unsuccessful trial runs/items that do not meet quality requirements
- redirecting unsuccessful trial runs/items that do not meet quality requirements for energy recovery

Pre-startup checks

are conducted to ensure:

- equipment has been set up correctly
- blades are installed accurately
- machinery is operating to optimum performance

Output is to include:

- the speed or rate at which material is cut

Waste may include:

- off-cuts
- shavings
- sawdust

Records and reports may include:

- cutting method
- product type
- size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual

RANGE STATEMENT

- Dealing with** may include:
- computer-based system
 - other appropriate organisational communication system
 - repairing or sending removed blades for repair
 - recycling removed blades that cannot be repaired
 - sending removed blades that cannot be repaired to waste

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3235B Machine material using CNC machining and processing centres

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to set up, operate and maintain computer numerically controlled (CNC) machining and processing centres used for the production of panels and components. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3235A Machine material using CNC sizing machines

Application of the Unit

Application of the unit The unit involves machining material using CNC sizing machines in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------|--|
| 1. Prepare for machining | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to machining material using CNC sizing machines are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be <i>machined</i> is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Material <i>machining process</i> is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Set up machine | <p>2.1. <i>CNC program</i> is set to job specifications</p> <p>2.2. Safety equipment, including emergency stops, gauges, guards and controls, is checked</p> <p>2.3. <i>Machine settings</i> and adjustments are made in line with job requirements and machine and tool manufacturer's instructions</p> <p>2.4. Machines, <i>cutting tools</i> and <i>jigs</i> are checked for safe</p> |

ELEMENT**PERFORMANCE CRITERIA**

- and effective operation
- 2.5. Trial runs are conducted to check machine operation, accuracy and quality of finished work
- 2.6. Final adjustments are made to the CNC programs and equipment in line with workplace procedures
- 2.7. Successful trial runs are included in the process and unsuccessful trial runs are **disposed of** in line with site procedures and environmental requirements
3. Operate machine
- 3.1. **Pre-startup checks** are carried out on equipment in line with site requirements
- 3.2. Material is fed into machine in line with manufacturer's instructions, safe handling procedures and standard workplace operating procedures
- 3.3. Machine is operated in line with its designed capacity and purpose, tooling requirements and manufacturer recommendations
- 3.4. Machine operation is monitored to ensure product quality and **output**
- 3.5. **Waste** quantities are checked and minimised
- 3.6. Items that do not meet quality requirements are repaired or disposed of in line with workplace procedures
- 3.7. Machining process and equipment faults are **recorded and reported** to the appropriate personnel
4. Conduct operator maintenance
- 4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 4.2. Cutting tools are checked for blunt or damaged condition in line with site procedures
- 4.3. Cutting tools are removed and replaced in line with manufacturer recommendations
- 4.4. Removed cutting tools are **dealt with** in line with site procedures, manufacturer recommendations and environmental requirements
- 4.5. Machining area is kept clear of dust, off-cuts and debris in line with OHS and environmental requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely machine material using CNC sizing machines
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for machining material using CNC sizing machines
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for machining material using CNC sizing machines
- Environmental risks and hazards
- Criteria for recycling and re-using unsuccessful trial runs/items that do not meet quality requirements
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of timber, timber products and defects
- Setup and operation of CNC equipment
- Cutting patterns and sequences
- Methods for assessing condition of cutting tool
- Industry standard cross sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently machine materials using CNC sizing machines according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to machining material using CNC sizing machines
- following organisational policies and procedures relevant to machining material using CNC sizing machines
- machining materials using CNC equipment in line with the work order and within prescribed organisational tolerances
- setting computer programs for the CNC equipment to follow
- conducting operator maintenance on CNC equipment
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

Context of and specific resources for assessment

EVIDENCE GUIDE

Method of assessment

- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised**

RANGE STATEMENT

wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role

RANGE STATEMENT

and responsibility

- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the machining and despatch of timber and timber products from the work site

and may include:

- type
- size
- length
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board

RANGE STATEMENT

- Machining** is to include:
- products
 - coated and/or treated timber products
 - beams, including laminated beams
 - boring
 - routing
 - mortising operations with CNC equipment
- Storage locations** may include:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** is to include:
- CNC machining and processing centres, including three axis machining centres
 - procedures for lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source
- and may include:
- multi-tasking machining centres
 - flat-bed routers and mortisers
 - dust extraction equipment
- Machining process** may include:
- selecting and adjusting templates suitable for marking
 - checking profile cutters and finished product
 - selecting and checking necessary adjustments to cutters

RANGE STATEMENT

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

CNC program

is the computer-generated program selected by the operator (sub-programs, parametrics performance of CAM functions, downloading and storage of data), which translates into the CNC equipment operating automatically to fulfil its programmed instructions

Machine settings may include:

- measuring and setting equipment to:
 - stops
 - fences
 - angles
 - depths
 - feeds
 - speeds

Cutting tools may include:

- router bits
- boring or drilling bits
- mortising bits

Jigs may include:

- shaped templates for routing

Disposing of may include:

- recycling unsuccessful trial runs/items that do not meet quality requirements
- re-using unsuccessful trial runs/items that do not meet quality requirements
- redirecting unsuccessful trial runs/items that do not meet quality requirements for energy recovery

Pre-startup checks

are conducted to ensure:

- equipment has been set up correctly
- cutting tools are installed accurately
- machinery operates to optimum performance

RANGE STATEMENT

Output is to include:

- the speed or rate at which material is machined

Waste may include:

- off-cuts
- shavings
- sawdust

Records and reports may include:

- machining method
- product type and size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Dealing with may include:

- repairing or sending removed cutting tools for repair
- recycling removed cutting tools that cannot be repaired
- sending removed cutting tools that cannot be repaired to waste

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3236B Coordinate stock control procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to coordinate and review stock line operations, stock inventory levels, and stock security; to identify and rectify problems; and to implement ongoing solutions for smooth receipt and despatch of products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3236A Coordinate stock control procedures

Application of the Unit

Application of the unit

The unit involves coordinating stock control procedures in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Monitor stock control | <p>1.1.Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to coordinating <i>stock control</i> procedures are identified and followed</p> <p>1.2.<i>Communication</i> with others is established and maintained in line with OHS requirements</p> <p>1.3.<i>Product group</i> recording is delegated to the <i>appropriate personnel</i></p> <p>1.4.Stock levels are monitored and maintained at optimum level in line with site policies and procedures</p> <p>1.5.Stock re-order <i>cycles</i> are monitored and adjusted to maintain consistent supply</p> <p>1.6.Management <i>inventory</i> reports are analysed and corrective action is taken</p> <p>1.7.Buyers are notified of stock levels in line with site policies and procedures and customer requirements</p> |
| 2. Monitor receipt and despatch of products | <p>2.1.<i>Receipt and despatch</i> of products are delegated to the appropriate personnel</p> <p>2.2.Receipt and despatch procedures including <i>documentation processes</i> are implemented</p> <p>2.3.<i>Product distribution</i> within the site is actioned in line with site procedures and client requirements</p> |

ELEMENT	PERFORMANCE CRITERIA
	2.4. Products received and for despatch are securely stored in the correct location in line with <i>safe handling techniques</i>
	2.5. Anomalies in quantity or quality of products are reported
	2.6. Stock <i>damage and losses</i> are inspected, assessed and reported against loss forecasts, with unacceptable cases investigated
	2.7. Advice is provided about the most appropriate way of <i>dealing with</i> damaged stock
3. Monitor and maintain site security policies	3.1. <i>Site security procedures</i> are monitored and feedback is provided to management
	3.2. Staff are advised of store security procedures in line with site policies and procedures
	3.3. Management are advised of policy development and training requirements for site security

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; implement stock control procedures; use safe handling techniques; assess stock condition
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for coordinating stock control procedures

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for coordinating stock control procedures
- Environmental risks and hazards
- Stock control procedures
- Inventory levels and re-ordering systems
- Site security policies
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently coordinate stock control procedures in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to coordinating stock control procedures
- following organisational policies and procedures relevant to coordinating stock control procedures

EVIDENCE GUIDE

Context of and specific resources for assessment

- coordinating stock control procedures for a work site, including coordinating staff and inventory
- implementing site security procedures for the control of stock
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations,

RANGE STATEMENT

certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Stock control may include:

- variations in product quality
- non-availability of product backup
- recall of products
- emergency withdrawal of products
- stock clear-outs
- stock records on manual or computerised systems
- documented or not documented site policies and procedures
- size of site
- multi-skilling of staff
- loss forecasts
- product range

RANGE STATEMENT

- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Product groups** are the break-up of the product range into distinct common groupings which are matched to job sizing
- Appropriate personnel** may include:
- delegated employees trained (or in training) to undertake stock control
- Cycles** generally refer to re-order processes for renewing stock at financially viable quantities or when products become available from the manufacturing process
- Inventory** generally refers to products available immediately for purchase and despatch
- Receipt and despatch** are to include:
- receiving and despatching products or goods:
- via various forms of transportation
 - through an organised and documented recording and checking system
- Documentation processes** may include:
- receipt and despatch orders
 - product type and size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality and quantity outcomes
 - loss
 - damage
 - hazards
 - incidents
 - equipment malfunctions
- Product distribution** may include:
- the movement of products or goods around a site (with minimal disruption to customer)

RANGE STATEMENT

- activity):
- to a designated storage location
 - for display purposes
- Safe handling techniques** are to include:
- OHS regulations for shifting loads
 - may include the use of:
 - fork lifts, slings, trolley jacks, gantry cranes, elevated work platforms and loaders
 - assistance with lifting, such as involving two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- Damage and losses** may include:
- products or goods damaged during transportation
 - distribution
 - accidents
 - staff error or loss through negligence
 - theft
 - incorrect allocation
- Dealing with** may include:
- recycling damaged stock
 - re-using damaged stock
 - sending damaged stock to waste
- Site security procedures** may include:
- site surveillance
 - store theft
 - staff theft
 - fraudulent credit card transactions
 - site security policies and procedures

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3237B Produce templates

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to develop and produce templates to suit various production activities associated with static machines and computer numerically controlled (CNC) equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3237A Produce templates

Application of the Unit

Application of the unit

The unit involves producing templates in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------|---|
| 1. Prepare for production | <p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to producing templates are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>templates</i> to be <i>produced</i> are identified and <i>materials</i> are obtained</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Template production process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Plan template production | <p>2.1. Material for template is selected for appropriate size and <i>characteristics</i></p> <p>2.2. Drawings and related specifications are interpreted in line with template requirements and equipment application</p> <p>2.3. Dimensions are measured and plotted, maintaining correct angles, arcs and curves</p> <p>2.4. Visual inspection and measurements are made to check template dimensions and shape against drawings and specifications</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Produce templates	<p>3.1. Template is constructed using <i>hardware</i> that will not affect operation or use</p> <p>3.2. Template <i>patterns</i> are dated and signed, and notations are made regarding their use</p> <p>3.3. Rejected templates and off-cuts are <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>3.4. Plans are stored in line with workplace procedures</p> <p>3.5. Template production process and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely produce templates
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing templates
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for producing templates
- Environmental risks and hazards
- Using material effectively and efficiently

REQUIRED SKILLS AND KNOWLEDGE

- Characteristics of timber and timber defects
- Templates and their use
- Assembly sequences and dimensions
- Assembly componentry and construction standards
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce templates according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to producing templates
- following organisational policies and procedures relevant to producing templates
- producing templates in line with the work order and product requirements

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and

EVIDENCE GUIDE

environmental constraints

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination

RANGE STATEMENT

Organisational requirements may include:

- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the production of templates for the work site

and may include:

- type
- size
- length
- angle
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Templates may include:

- devices that assist with the operation of a piece of equipment (CNC or static) to produce shaped, tapered or moulded products

Production may include:

- using plans, dimensions and patterns to produce templates with timber or timber products using adhesives and hardware, made

RANGE STATEMENT

as a proforma which allows the desired shape, taper or mould to be achieved

Material may include:

- native timber species
- imported timber species
- dressed timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard
- other manufactured board products and hardware products

Equipment may include:

- measuring equipment
- patterns
- assembly equipment

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Characteristics may include:

- strength
- direction of grain
- hardness
- wear
- flexibility

Hardware may include:

- nails or screws placed so that they cannot be struck by cutters, or hit or bump the operating parts of the equipment in a way that would affect the outcome of the product

Patterns may include:

- flat metal patterns cut to a shape matching the product requirements
- ply patterns cut to a shape matching the product requirements

Disposing of may include:

- recycling rejected templates and off-cuts
- re-using rejected templates and off-cuts
- redirecting rejected templates and off-cuts for energy recovery

RANGE STATEMENT

Records and reports may include:

- product type and size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3238B Operate a pole saw

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to trim high branches reachable with a mechanical pole saw and to promote tree growth by trimming excess branches. The unit includes equipment maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3238A Operate a pole saw

Application of the Unit

Application of the unit The unit involves operating a pole saw in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|---|
| 1. Prepare for trimming | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to operating a pole saw are identified and followed</p> <p>1.2. <i>Work plan</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>trees</i> to be <i>trimmed</i> are identified and assessed for safe working conditions</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>1.6. Trimming activities are planned in line with site procedures and environmental requirements</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Assess trees | <p>2.1. <i>Environmental conditions</i> are assessed and used to plan the trimming of each tree</p> <p>2.2. Movement and whereabouts of other personnel are monitored and work is modified in line with OHS regulations</p> <p>2.3. Tree, location and stability are assessed for <i>conditions</i> likely to affect safety of trimming activities</p> <p>2.4. Trees unable to be trimmed safely are identified and</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Trim trees	<p>referred to appropriate personnel</p> <p>3.1. Accessible branches and knots are trimmed to specifications in line with maximum height allowances and manufacturer recommendations</p> <p>3.2. <i>Pole saw</i> is operated to trim tree in line with safety regulations and cutting technique is adjusted in response to condition of the tree</p> <p>3.3. Unexpected characteristics of a tree are diagnosed and planning is reviewed</p> <p>3.4. Cut is completed once initiated, minimising <i>splitting</i> and in line with the work plan</p> <p>3.5. Cut branches are <i>cleared</i> from the site in line with standard operating procedures and environmental requirements</p> <p>3.6. Trimming processes and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>
4. Conduct operator maintenance	<p>4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>4.2. <i>Chain</i> is checked for blunt or damaged condition</p> <p>4.3. Chain and other components are removed, sharpened, maintained, adjusted and replaced in line with manufacturer recommendations</p> <p>4.4. Chain and other components that need replacing are <i>dealt with</i> in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>4.5. Pole saw setup is assessed and adjusted to suit cutting conditions</p> <p>4.6. Pole saw is kept clear of dust, shavings and debris and checked to make sure it meets relevant standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely trim trees

REQUIRED SKILLS AND KNOWLEDGE

- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a pole saw
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a pole saw, including safety procedures
- Environmental risks and hazards
- Using energy effectively and efficiently
- Characteristics of trees and timber defects
- Trimming procedures for cutting overhead
- Methods for assessing condition of pole saw chain
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must

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be able to provide evidence that they can safely and efficiently operate a pole saw in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to operating a pole saw
- following organisational policies and procedures relevant to operating a pole saw
- trimming trees with a pole saw in line with the work plan and within prescribed organisational tolerances
- conducting operator maintenance on a pole saw
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Context of and specific resources for assessment

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge

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- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management

RANGE STATEMENT

- elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements may include:**
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work plan is to include:**
- instructions for the trimming and despatch of felled branches from the work site

RANGE STATEMENT

and may include:

- type
- size
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Trees may include:

- native species
- imported species
- plantation trees
- non-plantation trees

Trimming is to include:

- cutting off branches, burls and other small growths at a height requiring the use of a pole saw

Equipment is to include:

- procedures for pole saw lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine

and may include:

- pole saws
- specific safety attire
- maintenance tools and equipment

Pre-startup checks

are conducted to ensure:

- equipment has been set up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding

RANGE STATEMENT

- use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Environmental conditions** may include:
- ground growth
 - ground slope
 - ground hazards
 - obstacles
- Conditions** may include:
- location of the tree in determining safety for trimming conditions
 - stability of the tree in determining safety for trimming conditions
- Pole saw** is to include:
- mechanised saw at the end of a long extension pole from the bottom of the pole
- and may also include:
- manual saws
 - non-mechanised saws
- Splitting** is the branch tearing away part of the tree bark beneath the branch, once the branch releases from the result of cutting
- Clearing** may include:
- recycling cut branches
 - redirecting cut branches for energy recovery
- Records and reports** may include:
- tree type
 - size
 - length
 - diameter
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

RANGE STATEMENT

Chain

is the fast moving component surrounding the pole saw blade, containing many linked teeth

Dealing with may include:

- recycling chain and other components that need replacing
- re-using chain and other components that need replacing
- sending chain and other components that need replacing to landfill

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3239B Create drawings using computer aided design systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare the computer aided design (CAD) environment, create two dimensional (2D) drawings and produce output, including linked material lists

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3239A Create drawings using computer aided design systems

Application of the Unit

Application of the unit

This unit involves creating drawings using computer aided design systems in a forestry office setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for drawing	<p>1.1. Applicable occupational health and safety (OHS), environmental, legislative and organisational requirements relevant to creating drawings electronically are identified and followed</p> <p>1.2. Types of drawings to be created with CAD systems are identified and clarified with appropriate personnel</p> <p>1.3. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.4. CAD process is planned in line with site procedures</p> <p>1.5. Communication with others is established and maintained in line with OHS requirements</p>
2. Set up CAD environment	<p>2.1. System variables are customised to suit standard operating procedure</p> <p>2.2. Menus are customised to suit standard operating procedure</p> <p>2.3. Drawing defaults are customised to standard operating procedure</p> <p>2.4. Macros are developed to standard operating procedure</p>
3. Create 2D drawings	<p>3.1. Drawings are created using the full capability of the</p>

ELEMENT**PERFORMANCE CRITERIA**

- available software system
- 3.2. Drawing *entities* are linked to database *attributes* to suit job requirements
- 3.3. *Detailed views* are created using various *scales* to meet job requirements
- 3.4. *Files* are saved in various formats in line with standard operating procedures
- 3.5. Linked entities are formatted as *materials lists* to meet job requirements
- 3.6. *Supplementary data* is extracted from drawings to meet job requirements
- 3.7. Drawing process and equipment faults are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level required for this unit.

Required skills include:

- Technical skills sufficient to use relevant tools, machinery and equipment; create drawings using CAD systems
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge include:

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for creating drawings using CAD systems
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for creating drawings using CAD systems
- Environmental risks and hazards

REQUIRED SKILLS AND KNOWLEDGE

- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of timber, timber products and defects
- Setup of CAD programs
- Building products
- Drawing techniques and principles
- Computer operation
- Standard material sizes
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently create drawings using CAD systems according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to creating drawings using CAD systems
- following organisational policies and procedures relevant to creating drawings using CAD systems
- communicating and working safely with others in the

EVIDENCE GUIDE

- work area
- creating drawings using CAD systems in line with site requirements
 - producing linked materials lists
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

RANGE STATEMENT

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Drawings** may include:
- plans
 - diagrams
 - charts
 - elevations
- CAD systems** are proprietary software programs
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** is to include:
- computers
 - CAD software programs
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback

RANGE STATEMENT

- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

System variables may include: variations in:

- computer operating systems
- versions of software used

Menus are to include:

- software program task bar options and pull down menus for various functions in a computer application

Drawing defaults

are standard or customised default settings previously set which the CAD system automatically applies during operation

Macros

are series of abbreviated instructions expanded automatically when required

Entities are to include:

any single item created on the screen, such as:

- lines
- arcs
- circles
- text
- hatch
- dimensions

Attributes may include:

- properties associated with an entity

and include:

- layer or level
- line type
- line width
- colour and text

Detailed views may include:

- plan
- elevation
- section
- exploded views

Scale

is the ratio between units in a numerical system, such as 1:5, 1:10, 1:100 and so on, using standard

RANGE STATEMENT

construction drawing decimal scales

Files may include:

- IGES
- DXF
- HPGL

Materials lists

are various components determined by the drawing which need to be cut and prepared for the assembly process

Supplementary data may include:

- areas
- lengths
- angles
- perimeters

Records and reports may include:

- specified drawings
- product type and size
- quality outcomes

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3240B Grade heavy structural/engineered products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit specifies the outcomes required to visually evaluate material characteristics and defects for classification into various strength and appearance grades. It includes classifying sleepers, crossings, mine guides and other heavy structural or engineered products in line with grade

This unit replaces FPICOT3240A Grade heavy structural/engineered products

Application of the Unit

Application of the unit This unit involves grading heavy structural/engineered products in a forest environment setting

These skills and knowledge required for are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for grading	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to grading heavy structural or engineered products are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>engineered products</i> to be <i>graded</i> are acquired from the <i>storage</i> location</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Grading process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Grade heavy structural or engineered products	<p>2.1. Timber requirements for storage or subsequent processing operations are selected</p> <p>2.2. Timber characteristics and <i>defects</i> of each piece of timber are evaluated against industry standards for grade type</p> <p>2.3. <i>Moisture content</i> is measured, recorded and reported</p> <p>2.4. Defects are clearly marked for docking in line with site requirements</p> <p>2.5. Timber is marked and sorted in line with its grade classification, using markers or stickers that are clearly understood</p> <p>2.6. Grading outcomes and distribution problems are</p>

ELEMENT	PERFORMANCE CRITERIA
	<i>recorded and reported</i> in line with workplace procedures
3. Distribute material	3.1. Material is directed and moved to storage or processing operations in line with site requirements 3.2. Sub-standard material is rejected and <i>disposed of</i> in line with site requirements 3.3. <i>On-site movement of material</i> is monitored to ensure intended flow is achieved 3.4. Storage locations are labelled in line with site systems

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; accurately grade heavy structural or engineered products; evaluate timber characteristics
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure moisture content, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for grading heavy structural or engineered products
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for grading heavy structural or engineered products
- Environmental risks and hazards
- Criteria for recycling and re-using timber or material with defects and sub-standard

REQUIRED SKILLS AND KNOWLEDGE

timber or material

- Methods of visual estimation, grading, colour identification and tagging
- Heavy structural or engineered products and their use
- Sorting, marking and distribution processes
- Industry standard cross sections and lengths
- Storage systems and labelling procedures
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently grade heavy structural or engineered products according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to grading heavy structural or engineered products
- following organisational policies and procedures relevant to grading heavy structural or engineered products
- communicating and working safely with others in the work area
- grading heavy structural or engineered products to the appropriate standard
- measuring moisture content and identifying defects and characteristics in timber

EVIDENCE GUIDE

Context of and specific resources for assessment

- distributing material on site using designated equipment
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other

EVIDENCE GUIDE

than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

RANGE STATEMENT

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements
may include:

Work order is to include:

instructions for:

- receiving, despatching and grading
- sorting and marking heavy structural or engineered products to and from the designated storage location or processing

and may include:

- type
- size
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- supervisors

Appropriate personnel may

RANGE STATEMENT

include:

- suppliers
- clients
- colleagues
- managers

Engineered products may include:

- sleepers, crossings, mine guides, piles and cross arms for overhead lines
- decking for wharves and bridges
- poles
- other heavy structural or engineered products

Grading

is visually evaluating timber characteristics and defects for classification into various strength and appearance grades

Storage may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- moisture meters
- lifting equipment for the movement of material

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language

RANGE STATEMENT

- Defects may include:**
- use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
- Moisture content** is the amount of moisture maintained in timber or timber products after kiln drying or panel production to avoid cracking and deforming
- Records and reports may include:**
- product type and size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system
- Disposing of may include:**
- recycling sub-standard material
 - re-using sub-standard material
 - redirecting sub-standard material for energy recovery
- On-site movement of material may include:** the use of:
- conveyor belt systems
 - track systems
 - lifting equipment
- lifting equipment, such as:
- fork lifts
 - slings
 - trolley jacks

RANGE STATEMENT

- gantry cranes
- loaders

assistance with lifting, such as:

- involving two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3241B Assemble timber wall frames

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and assemble construction-ready timber wall frame sections, and to stack, strap and despatch them in readiness for transport to a construction site

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3241A Assemble timber wall frames

Application of the Unit

Application of the unit

The unit involves assembling timber wall frames in a timber and wood products production setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|--|
| 1. Prepare for assembly | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to assembling <i>timber wall frames</i> are identified and followed</p> <p>1.2. <i>Work order</i> and construction plans are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> and <i>assembly hardware</i> to be assembled are collected</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. <i>Setup jigs</i> required for construction are specified and prepared</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Set up components | <p>2.1. <i>Timber components</i> are selected from pre-cut material in line with the cutting list</p> <p>2.2. Components are positioned and clamped in jigs ready for joining with allowable faults, joins and grain in line with construction standards and grading rules</p> <p>2.3. <i>Defective components</i> are rejected and <i>disposed of</i></p> |

ELEMENT	PERFORMANCE CRITERIA
	in line with site procedures and environmental requirements
	2.4. Components are nailed to maintain temporary alignment during assembly
3. Install assembly hardware	3.1. Assembly hardware is located and selected in line with the construction plans and standards
	3.2. Hardware is positioned on joints and installed
	3.3. <i>Temporary bracing</i> is nailed or stapled to the product in line with construction standards
	3.4. <i>Assembly faults</i> are corrected in line with site procedures
4. Prepare products for despatch and report	4.1. Finished product is assessed for quality against construction standards and labelled in line with work order
	4.2. Components are removed from jigs and safely <i>stacked</i> in a designated location in line with work order
	4.3. Finished products are <i>strapped</i> and <i>pre-slung</i> ready for transportation in line with industry or organisational standards and methods
	4.4. Bracing and strapping waste material is minimised and <i>dealt with</i> in line with site procedures, manufacturer recommendations and environmental requirements
	4.5. <i>Equipment faults</i> are recognised and reported in line with site procedures
	4.6. <i>Records and reports</i> are accurately completed, processed and maintained in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; assemble timber wall frames
- Communication skills sufficient to use appropriate communication and

REQUIRED SKILLS AND KNOWLEDGE

interpersonal techniques with colleagues and others

- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assembling timber wall frames
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber)
- Organisational and site standards, requirements, policies and procedures for assembling timber wall frames
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of timber and timber defects
- Key features of wall frames and their use
- Assembly sequences and jigs
- Assembly componentry and construction standards
- Quality requirements of national building codes and standards
- Industry standard cross sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

EVIDENCE GUIDE

Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assemble timber wall frames according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to assembling timber wall frames
- following organisational policies and procedures relevant to assembling timber wall frames
- assembling timber wall frames in line with the work order, construction plans, construction standards and engineering specifications
- stacking and strapping bundles of completed products in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements

RANGE STATEMENT

- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Timber wall frames** may include:
- wall components such as:
 - studs
 - top and bottom plates
 - lintels
 - trimmers
 - nogging
 - bracing
- Work order** is to include:
- instructions for the assembly and despatch of timber and timber products from the work site
- and may include:
- construction plans or drawings
 - type of product
 - size
 - quantity
 - grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Material** may include:
- native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - stress and non-stress graded timber
 - preservative treated timber
 - coated and/or treated timber products
 - beams, including laminated beams
- Assembly hardware** may include:
- nailing plates
 - gang nails
 - nail gun nails
 - staples

RANGE STATEMENT

Equipment may include:

- measuring equipment
- circular saws
- docking saws
- drills
- assembly jigs
- nail plate presses
- staple guns
- nail guns
- compressor or compressed air supply
- marking equipment
- strapping equipment

Setup jigs

are enterprise manufactured templates that assist in the positioning of components during the assembly process

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Timber components

are the sections of timber or timber product which have been pre-cut in readiness for assembly and have been cut to follow the construction plans and cutting list

Defective components may include:

components with an unacceptable level of:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling defective components
- re-using defective components
- redirecting defective components for energy

RANGE STATEMENT

recovery

Temporary bracing

may be fixed to secure the assembled wall frames in alignment and square during transportation, moving and positioning on site

Assembly faults may include:

- incorrectly positioned joints
- timber splits from nailing
- incorrectly positioned hardware

Stacking may include:

- preparing for transport
- categorising in common size and shape
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Strapping may include:

- securing bundles with metal or plastic strap
- tightening and tensioning using hand-held equipment, to prevent slippage, strap breakage and damage to products

Pre-slung is to include:

- use of wire slings to assist in transporting product
- use of other slinging devices to assist in transporting product

Dealing with may include:

- recycling bracing and strapping waste material
- re-using bracing and strapping waste material
- redirecting bracing and strapping waste for energy recovery
- sending bracing and strapping waste to landfill

Equipment faults may include:

- damaged equipment components
- electrical faults

Records and reports may include:

- product type and size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational

RANGE STATEMENT

communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3242B Lay up timber roof trusses

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and set up the assembly of timber roof trusses using a truss jig or computer-operated truss table and to oversee the operation of the truss press

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3242A Lay up timber roof trusses

Application of the Unit

Application of the unit

The unit involves laying up timber roof trusses in a timber and wood products production setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|--|
| 1. Prepare for assembly | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to laying up <i>timber roof trusses</i> are identified and followed</p> <p>1.2. <i>Work order</i> and construction plans are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> and <i>assembly hardware</i> to be assembled are collected</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. <i>Setup jigs</i> required for construction are specified and prepared</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Lay up truss | <p>2.1. Product size and number of joints are assessed with jig area, and sections and layout are planned</p> <p>2.2. <i>Timber components</i> are selected from pre-cut material in line with the cutting list and checked for fit</p> <p>2.3. Jig components are positioned to accurately locate and support the assembly components and the jig or</p> |

ELEMENT**PERFORMANCE CRITERIA**

- table is adjusted to suit
- 2.4. Components are positioned and clamped in jigs ready for joining with allowable faults, joints and grain in line with construction standards and grading rules
- 2.5. Components are set to include camber adjustments, overhang and other design requirements
- 2.6. **Defective components** are rejected and **disposed of** in line with site procedures and environmental requirements
- 2.7. Components are nailed to maintain temporary alignment during assembly
3. Control pressing operations
- 3.1. Assembly hardware is located and selected in line with construction plans and standards
- 3.2. Hardware is positioned on joints and installed in line with design specifications
- 3.3. Truss-pressing operations are coordinated to ensure finished product meets customer orders
- 3.4. **Assembly faults** are corrected in line with site procedures
4. Prepare products for despatch and report
- 4.1. Finished product is assessed for quality against construction standards and labelled in line with work order
- 4.2. Components are removed from jigs and safely **stacked** in a designated location in line with work order
- 4.3. Finished products are **strapped**, packed and labelled ready for transportation
- 4.4. Strapping waste material is minimised and **dealt with** in line with site procedures, manufacturer recommendations and environmental requirements
- 4.5. **Equipment faults** are recognised and reported in line with site procedures
- 4.6. **Records and reports** are accurately completed, processed and maintained in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; lay up timber roof trusses
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for laying up timber roof trusses
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber)
- Organisational and site standards, requirements, policies and procedures for laying up timber roof trusses
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of timber and timber defects
- Assembly sequences and jigs
- Assembly componentry and construction standards
- Quality requirements of national building codes and standards
- Industry standard cross sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently lay up timber roof trusses in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to laying up timber roof trusses
- following organisational policies and procedures relevant to laying up timber roof trusses
- laying up timber roof trusses in line with the work order, construction plans, construction standards and engineering specifications
- stacking and strapping bundles of completed products in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package

EVIDENCE GUIDE

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth,

RANGE STATEMENT

state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Timber roof trusses:**
- are frames or jointed structures designed to act as a beam of long span, while each member is usually subjected to longitudinal stress only, either tension or compression
 - may include joists, rafters, purlins, chords and beams
- Work order** is to include:
- instructions for the assembly and despatch of timber and timber products from the work site
- and may include:
- construction plans or drawings
 - type of product
 - size
 - quantity
 - grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Material** may include:
- native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - stress and non-stress graded timber
 - preservative treated timber
 - laminated veneer
 - coated and/or treated timber products
 - beams, including laminated beams
- Assembly hardware** may include:
- nailing plates
 - gang nails

RANGE STATEMENT

Equipment may include:	<ul style="list-style-type: none">• nail gun nails• staples• measuring equipment• circular saws• docking saws• drills• assembly jigs• nail plate presses• staple guns• nail guns• compressor or compressed air supply• marking equipment• strapping equipment
Setup jigs	are enterprise manufactured templates that assist in the positioning of components during the assembly process
Communication may include:	<ul style="list-style-type: none">• verbal and non-verbal language• constructive feedback• active listening• questioning to clarify and confirm understanding• use of positive, confident and cooperative language• use of language and concepts appropriate to individual social and cultural differences• control of tone of voice
Timber components	are the sections of timber or timber product which have been pre-cut in readiness for assembly and have been cut to follow the construction plans and cutting list
Defective components may include:	components with an unacceptable level of: <ul style="list-style-type: none">• warp• wane• cupping• shakes• insect defects• knots• resin pockets
Disposing of may include:	<ul style="list-style-type: none">• recycling defective components

RANGE STATEMENT

- re-using defective components
 - redirecting defective components for energy recovery
- Assembly faults** may include:
- incorrectly positioned joints
 - timber splits from nailing
 - incorrectly positioned hardware
- Stacking** may include:
- preparing for transport
 - categorising in common size and shape
 - marking lots in line with work order and site requirements
 - locating so as not to block access or passage
- Strapping** may include:
- securing bundles with metal or plastic strap
 - tightening and tensioning using hand-held equipment, to prevent slippage, strap breakage and damage to products
- Dealing with** may include:
- recycling strapping waste material
 - re-using strapping waste material
 - sending strapping waste to landfill
- Equipment faults** may include:
- damaged equipment components
 - electrical faults
- Records and reports** may include:
- product type and size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3243B Operate a truss press

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to operate a truss press in order to finalise the joining of prepared truss components in readiness for strapping, stacking and despatching for transport to a construction site

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3243A Operate a truss press

Application of the Unit

Application of the unit The unit involves operating a truss press in a timber and wood products production setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|--|
| 1. Prepare for pressing | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to operating a <i>truss</i> press are identified and followed</p> <p>1.2. <i>Work order</i> and construction plans are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> and <i>assembly hardware</i> to be pressed are collected</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Set up components | <p>2.1. <i>Timber components</i> are selected from pre-cut material in line with the cutting list</p> <p>2.2. Components are positioned and clamped in the press ready for joining with allowable faults, joints and grain in line with construction standards and grading rules</p> <p>2.3. Components are set to include camber adjustments, overhang and other design requirements</p> <p>2.4. <i>Defective components</i> are rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.5. Components are temporarily fastened to maintain alignment during setup procedure</p> |

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|---|--|
| 3. Press trusses | <p>2.6. Assembly hardware is located and selected in line with the construction plans and standards</p> <p>2.7. Hardware is positioned on joints and installed ready for pressing</p> <p>3.1. Pre-startup checks are carried out on equipment in line with site requirements</p> <p>3.2. Press cycle times and pressures are set and adjusted for production requirements</p> <p>3.3. Pressed trusses are checked for abnormalities and assembly faults are corrected in line with site procedures</p> <p>3.4. Unload and reload cycles are performed</p> <p>3.5. Pressed and finished trusses are regularly assessed and necessary changes to assembly and pressing processes are actioned</p> <p>3.6. Pressed trusses with abnormalities are dealt with in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>3.7. Pressing process and equipment faults are recorded and reported to the appropriate personnel</p> |
| 4. Prepare products for despatch and report | <p>4.1. Finished product is checked and labelled in line with the work order</p> <p>4.2. Components are removed from jigs and safely stacked in a designated location in line with work order requirements</p> <p>4.3. Finished product is removed from press and safely strapped and stacked ready for transportation</p> <p>4.4. Strapping waste is minimised and dealt with in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>4.5. Equipment faults are recognised and reported in line with site procedures</p> <p>4.6. Records and reports are accurately completed, processed and maintained in line with workplace procedures</p> |

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; press trusses
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults, and demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a truss press
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber)
- Organisational and site standards, requirements, policies and procedures for operating a truss press
- Environmental risks and hazards
- Criteria for recycling and re-using defective components and pressed trusses with abnormalities
- Characteristics of timber and timber defects
- Pressing techniques and equipment
- Truss types and their uses
- Assembly sequences and jigs, assembly componentry and construction standards
- Industry standard cross sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently press trusses in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to operating a truss press
- following organisational policies and procedures relevant to operating a truss press
- pressing trusses in line with the work order, construction plans, construction standards and engineering specifications
- stacking and strapping bundles of completed products in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and

RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Trusses may include:

- floor trusses
- roof trusses

Work order is to include:

- instructions for the assembly and despatch of timber and timber products from the work site

and may include:

- construction plans or drawings
- type of product
- size
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- laminated veneer
- coated and/or treated timber products
- beams, including laminated beams

Assembly hardware may include:

- nailing plates
- gang nails
- nail gun nails
- staples

RANGE STATEMENT

Equipment may include:

- roller presses
- platen presses
- C-clamp presses
- computer-automated presses
- measuring equipment
- assembly jigs
- staple guns
- nail guns
- compressor or compressed air supply
- marking equipment
- strapping equipment

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Timber components

are the sections of timber or timber product which have been pre-cut in readiness for assembly and have been cut to follow the construction plans and cutting list

Defective components may include:

components with an unacceptable level of:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling defective components
- re-using defective components
- redirecting defective components for energy recovery

Pre-startup checks

are conducted to ensure:

- equipment has been set up correctly

RANGE STATEMENT

- systems are performing accurately
- machinery is operating to optimum performance

Cycle

is the process of:

- pressing trusses until structurally ready
- unloading the press and restarting the process
- commencing another cycle

and includes:

- time considerations
- pressure considerations
- incorrectly positioned joints
- timber splits from nailing
- incorrectly positioned hardware

Assembly faults may include:

Dealing with may include:

- recycling pressed trusses with abnormalities/strapping waste
- re-using pressed trusses with abnormalities/strapping waste
- redirecting pressed trusses with abnormalities for energy recovery
- sending pressed trusses with abnormalities/strapping waste to landfill

Stacking may include:

- preparing for transport
- categorising in common size and shape
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Equipment faults may include:

- damaged equipment components
- electrical faults

Records and reports may include:

- product type and size
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system

RANGE STATEMENT

- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3244B Cut material to profile

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and cut material to a profile with shaping equipment, and to produce moulded timber products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3244A Cut material to profile

Application of the Unit

Application of the unit

The unit involves cutting material to profile in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for profiling	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to cutting material to <i>profile</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be profiled is selected from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Profile to be cut is identified and cutting blades are selected</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set up profiling equipment	<p>2.1. <i>Pre-startup checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Machine guides</i> are selected and attached to the machinery</p> <p>2.3. Cutting blades are installed in the selected machinery</p> <p>2.4. Depth of cut and profile are set in line with the required profile and minimisation of waste</p> <p>2.5. Material stack is positioned in close proximity to maximise ease of machine feeding</p> <p>2.6. Equipment setup is checked and adjusted by running a piece of timber through the machine to set depth</p>

ELEMENT	PERFORMANCE CRITERIA
3. Cut material to profile	<p>and profile</p> <p>3.1. Material is fed into the machine at the <i>feed rate</i> prescribed by organisational requirements</p> <p>3.2. Cutting sequence is followed, maintained and adjusted to produce the required quantity and maximise the feed rate</p> <p>3.3. Profiling process is regularly checked and adjusted to maintain the desired depth and profile</p> <p>3.4. Material with <i>features</i> is rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>3.5. Processing and equipment faults are reported to the appropriate personnel</p> <p>3.6. Material is safely <i>stacked</i> in a designated location in line with work order</p> <p>3.7. <i>Records and reports</i> are accurately completed, processed and maintained in line with workplace procedures</p>
4. Conduct operator maintenance	<p>4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>4.2. Cutting blades are checked for blunt or damaged condition in line with site procedures</p> <p>4.3. Cutting blades are removed, <i>dealt with</i> and replaced in line with manufacturer recommendations</p> <p>4.4. Machine area is kept clear of dust and debris in line with OHS and environmental requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely cut material to profile
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain

REQUIRED SKILLS AND KNOWLEDGE

documentation

- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for cutting material to profile
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber)
- Organisational and site standards, requirements, policies and procedures for cutting material to profile
- Environmental risks and hazards
- Criteria for recycling and re-using material with features
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of timber and timber features
- Cutting profiles, feed rates and finish
- Methods for assessing condition of cutting blade
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and

EVIDENCE GUIDE

efficiently cut material to profile in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to cutting material to profile
- following organisational policies and procedures relevant to cutting material to profile
- cutting material to profile in line with the work order and prescribed organisational specifications
- conducting operator maintenance
- stacking batches of cut material in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration employability skills
- Assessment methods must confirm the ability to

EVIDENCE GUIDE

access and correctly interpret and apply the required knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment

RANGE STATEMENT

- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

Profile may include:

various shapes and patterns into which steel cutting blades can be shaped that will in turn shape the timber or timber product to achieve the desired profile outcome and may include:

- quad
- beading
- mouldings
- shaped beams
- architraves
- skirting boards
- scotia

Work order is to include:

instructions for the cutting and despatch of timber and timber products from the work site

and may include:

- type
- size
- length
- profile
- thickness
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board

RANGE STATEMENT

- Storage locations** may include:
- products
 - coated and/or treated timber products
 - beams, including laminated beams
 - storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** is to include:
- procedures for machine lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

and may include:

- measuring equipment
 - multi-head planing machines (four siders)
 - spindle moulders
 - routing machines
 - shaping machines
 - profile cutting blades in various shapes and sizes
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language

RANGE STATEMENT

- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Pre-startup checks

are conducted to ensure:

- machine has been set up correctly
- cutters are installed accurately
- machine is operating to optimum performance

Machine guides may include:

- machine manufacturer produced guides located strategically on the machine to maintain timber in straight feed and ensure consistency of profile cut
- enterprise produced guides/jigs to maintain consistency of timber against cutting blades

Feed rate

is the rate of speed the material is passed through the machine affecting the sharpness of the cutting blades, the finish of the material, and the production output

Features may include:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling material with features
- re-using material with features
- redirecting material with features for energy recovery

Stacking may include:

- preparing for transport
- categorising in common size, length and angle
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Records and reports may include:

- product type and size
- profile
- inspection information
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards

RANGE STATEMENT

- incidents
- equipment malfunctions

and may be:

- manual
 - a computer-based system
 - other appropriate organisational communication system
- Dealing with** may include:
- repairing or sending for repair blunt or damaged cutting blades
 - recycling blunt or damaged cutting blades
 - re-using blunt or damaged cutting blades
 - sending cutting blades that cannot be repaired to landfill

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3245B Grade, sort and mark material

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to visually evaluate material characteristics and features for classification into various strength or appearance grades. It includes sorting material into classifications, marking material in line with grade and distributing material on site

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3245A Grade, sort and mark material

Application of the Unit

Application of the unit

The unit involves grading, sorting and marking material in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for grading, sorting and marking	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to grading, sorting and marking <i>material</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of material to be graded, sorted and marked is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. <i>Grading, sorting and marking</i> process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Grade, sort and mark material	<p>2.1. Requirements for material storage and subsequent processing operations are identified</p> <p>2.2. Material characteristics and <i>features</i> of each piece are evaluated against industry standards for grade type</p> <p>2.3. <i>Moisture content</i> is measured, recorded and reported in line with site procedures as required by the</p>

ELEMENT	PERFORMANCE CRITERIA
	enterprise
	2.4.Features are clearly marked for docking in line with site requirements
	2.5.Material is graded, marked and sorted in line with grade classification, using markers or stickers that are clearly understood
	2.6.Grading outcomes and distribution problems are recorded and reported in line with workplace procedures
3. Distribute material	3.1.Material is directed and moved to storage or processing operations in line with site requirements
	3.2.Sub-standard material is rejected and disposed of in line with site requirements
	3.3. On-site movement of material is monitored to ensure intended flow is achieved
	3.4.Storage locations are labelled in line with site systems

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; grade, sort and mark material
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for grading, sorting and marking material

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), and the safe use and storage of chemicals
- Organisational and site standards, requirements, policies and procedures for grading, sorting and marking material
- Environmental risks and hazards
- Criteria for recycling and re-using sub-standard material
- Using material effectively and efficiently
- Methods of visual estimation, grading, colour identification and tagging
- Sorting, marking and distribution processes
- Industry standard cross sections and lengths
- Storage systems and labelling procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently grade, sort and mark material in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy all the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to grading, sorting and marking material

EVIDENCE GUIDE

- following organisational policies and procedures relevant to grading, sorting and marking material
 - grading, sorting and marking a range of materials in readiness for storage and/or processing
 - distributing material on site using designated equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- plywood
- fibreboard and other manufactured board

RANGE STATEMENT

- Work order** is to include:
- products
 - coated and/or treated timber products
 - debarked logs
 - instructions for receiving, despatching, grading, sorting and marking materials to and from the designated storage location or processing
- and may include:
- type
 - size
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Storage locations** may include:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** may include:
- moisture meters
 - lifting equipment for the movement of

RANGE STATEMENT

- Grading, sorting and marking** may include:
- material
 - assessment of material for number and frequency of defects
 - requirements for grade and disposition
 - strength grades or appearance grades
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Features** may include:
- warp
 - wane
 - cupping
 - shakes
 - insect defects
 - loose or missing knots
 - resin pockets
 - dents
 - loose surface
 - lifting coatings
 - poor adhesion
 - thin or missing coatings
 - chipped edges
 - surface bubbles
 - splits
 - voids
 - splintered or missing edges
 - pin holes
- Moisture content** is the amount of moisture maintained in timber or timber products after kiln drying or panel production to avoid cracking and deforming
- Records and reports** may include:
- product type and size
 - inspection information
 - grading and labelling outcomes
 - storage locations

RANGE STATEMENT

- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material
- redirecting sub-standard material for energy recovery

On-site movement of material may include:

assistance with lifting, such as:

- involving two or more personnel to lift materials manually or to guide the movement of mechanical equipment

the use of:

- conveyor belt systems
- track systems
- lifting equipment, such as fork lifts, slings, trolley jacks, gantry cranes and loaders

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3246B Test heavy structural/engineered products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to test heavy structural and engineered products in line with product quality specifications. The unit includes establishing specifications and test methods, conducting and interpreting tests, and reporting findings

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3246A Test heavy structural/engineered products

Application of the Unit

Application of the unit

The unit involves testing heavy structural/engineered products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for testing	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>testing heavy structural and engineered products</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of products to be tested are acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Testing <i>process</i> is planned in line with workplace procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Test heavy structural and engineered products	<p>2.1. Appropriate heavy structural and engineered products are selected for testing in line with work order and workplace procedures</p> <p>2.2. Test is conducted in line with established test methods, quality assurance procedures and OHS requirements</p> <p>2.3. Testing problems are identified and resolved or</p>

ELEMENT	PERFORMANCE CRITERIA
	reported in line with workplace procedures
	2.4. Test results are obtained and comparisons of collected data are made against product specifications in line with workplace procedures
3. Report findings of test	3.1. Potential or existing problems are identified and appropriate recommendations on product quality are made in line with workplace procedures
	3.2. Testing outcomes are <i>recorded and reported</i> in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; operate testing equipment to test products
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to apply mathematical and estimation processes
- Problem solving skills sufficient to identify problems and faults in testing methods; demonstrate appropriate response procedures; identify problems and faults with the products tested

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for testing heavy structural and engineered products
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for testing heavy structural and engineered products
- Environmental risks and hazards
- Problem identification and resolution
- Types of testing equipment and methods
- Industry and enterprise standard tests and strength specifications

REQUIRED SKILLS AND KNOWLEDGE

- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently test heavy structural and engineered products in line with product specifications and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to testing heavy structural and engineered products
- following organisational policies and procedures relevant to testing heavy structural and engineered products
- preparing for testing of heavy structural and engineered products, including identifying product specifications, testing methods and potential problems likely to affect test results
- conducting testing procedures and interpreting the results
- using records and reported test processes and results to make recommendations on product quality

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

- Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Testing** may include: testing of properties such as:
- modulus of elasticity
 - surface hardness
 - modulus of rupture
 - sheer strength
 - compression strength
- Heavy structural and engineered products** may include:
- laminated beams
 - I beams
 - composite products
 - posi struts
 - box beams
 - braced beams
 - cross arms for overhead lines
 - decking for wharves and bridges
 - poles
 - other heavy structural or engineered products

RANGE STATEMENT

Work order may include:

- instructions for receiving, despatching and testing heavy structural or engineered products to and from the designated storage location
- specifications for product quality and testing methods
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- measuring devices
- lifting equipment for the movement of material

Process may include:

- identification of product quality specifications
- test methods

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening

RANGE STATEMENT

Records and reports may include:

- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- product type and size
- quality
- testing method
- inspection and testing outcomes
- storage locations
- problems
- recommendations
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3247B Select timber for forestry operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to select timber for use in a range of forestry operations by applying knowledge of timber technology

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3247A Select timber for forestry operations

Application of the Unit

Application of the unit The unit involves selecting timber for forestry operations in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---------------------------------|--|
| 1. Prepare for timber selection | 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to selecting <i>timber</i> for forestry operations are identified and followed
1.2. <i>Quality system</i> procedures that apply to work are implemented and adhered to
1.3. Products are <i>visually inspected</i> before processing and completion
1.4. <i>Product specifications</i> are checked and followed
1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Evaluate selected timber | 2.1. <i>Growth</i> and <i>durability</i> of the timber are assessed in line with site procedures
2.2. <i>Species, timber structure, features and characteristics</i> are assessed and reported
2.3. <i>Moisture content</i> of selected timber is identified to ensure it meets production requirements
2.4. <i>Density</i> and <i>working properties</i> of timber are identified to ensure they meet production requirements
2.5. <i>Faults and features</i> in the timber are identified and strategies suggested to overcome or maximise them
2.6. <i>Sawing patterns</i> that best suit the selected timber are identified |
| 3. Report on timber selection | 3.1. Timber is assessed for quality and specification requirements |

ELEMENT	PERFORMANCE CRITERIA
	3.2. Timber is prepared for <i>despatch</i> in a manner that prevents or minimises further damage
	3.3. Timber assessment outcomes are documented in line with organisational procedures
	3.4. Timber selection procedures are <i>recorded and reported</i> in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; select timber for forestry operations
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; locate, record and report information
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for selecting timber for forestry operations
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for selecting timber for forestry operations
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for selecting and optimising timber for forestry operations
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Quality systems and supply coordination
- Timber technology

REQUIRED SKILLS AND KNOWLEDGE

- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently select timber for forestry operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to selecting timber for forestry operations
- following organisational policies and procedures relevant to selecting timber for forestry operations
- selecting timber for forestry operations in line with environmental legislation and workplace procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context

EVIDENCE GUIDE

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Timber may include:

- trees
- logs
- planks
- panels
- board
- chips
- flake
- flitches
- cants

and may be:

- native or imported timber
- hardwood or softwood
- enterprise-based systems
- second-party certification
- third-party certification
- ISO9000 series
- other regulatory systems

Quality systems may include:

- enterprise-based systems
- second-party certification
- third-party certification
- ISO9000 series
- other regulatory systems

Visual inspection may include:

assessing the appropriateness of:

- defects
- contamination
- timber colours
- insect attack
- surface finishes

RANGE STATEMENT

- loose surfaces
 - bubbles
 - holes
 - breakages
 - machine caused defects
 - available resources
 - customer requirements
 - industry standard cross sections and lengths
 - enterprise standards
- Product specifications** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Communication** may include:
- growth patterns
 - make-up of a tree, including bark (cortex)
 - phloem
 - cambium layer
 - sapwood (xylem)
 - heartwood (truewood)
 - pith (medulla)
 - medullary rays
 - earlywood
 - latewood
 - growth rings
 - cellulose
 - hemicelluloses
 - lignin
 - extractives
- Growth** may include:
- strength
 - hardness and rating for use
 - classification and measurement
- Durability** may include:
- native species
 - imported species
- Species** may include:

RANGE STATEMENT

- Timber structures** may include:
- hardwood (pored wood) or softwood (non-pored wood)
 - cell structured timber, including:
 - vessels
 - fibres
 - ray cells
 - pits
 - tracheids
 - texture
 - seasoning methods
- Characteristics** may include:
- colour
 - density
 - texture
 - grain
 - figure
 - qualities
 - uses
- Moisture content:**
- is the amount of moisture maintained in timber or timber products after kiln drying or to avoid cracking and deforming
 - in Australia, generally ranges between 10% in warmer, more humid climates to 14% in cooler climates
 - includes the consideration of free water, bound water and water vapour
- Density** may include:
- closeness and size of the timber cells
 - green density
 - air dried density
 - basic density
 - strength and durability
 - swell pressures
- Working properties** may include:
- timber shrinkage
 - effects of light
 - moisture content
 - density and deterioration of the timber
 - compressive and tensile stresses
 - modulus of elasticity
 - modulus of rupture
 - deformation
 - creep

RANGE STATEMENT

- Faults and features** may include:
- surface hardness
 - bow
 - spring
 - twist
 - warp
 - wane
 - cupping
 - shakes
 - insect defects
 - fungi
 - knots
 - resin pockets
 - wild grain
 - sloping grain
- Sawing patterns** may include:
- live-sawn
 - back sawn
 - quarter sawn
- Despatch** is to include:
- sending out products relating to a customer order via various means of transport
- and may include:
- stacking
 - stripping
 - strapping
 - storing and despatching product
- Records and reports** may include:
- conducting visual inspection and timber selection
 - risks
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3248A Dry timber in solar assisted kilns

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to dry timber in solar assisted kilns to appropriate moisture contents and stress levels whilst keeping degrade to a minimum, including evaluation of energy savings and sustainable use principles

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves drying hardwood and softwood timber in a range of solar assisted kilns in timber and wood products production enterprises of all sizes

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------|--|
| 1. Prepare for drying | <ul style="list-style-type: none"> 1.1. Applicable Occupational Health and Safety (OHS), environmental, legislative and organisational requirements relevant to drying timber are identified and followed 1.2. Work order is reviewed and checked with appropriate personnel 1.3. Type and quantity of timber to be dried is determined and acquired from the conversion process 1.4. Racks to be dried are visually assessed for consistent drying characteristics and adjusted to meet site requirements 1.5. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.6. Oven sections and sample boards are selected and cut in line with standard operating procedures and initial moisture content is established 1.7. Drying process is planned in line with site procedures 1.8. Communication with others is established and maintained in line with OHS requirements |
|-----------------------|--|

ELEMENT	PERFORMANCE CRITERIA
2. Load kiln and control kiln conditions	2.1. Pre start-up checks are carried out on equipment in line with site requirements 2.2. Emergency shutdown procedures are followed in the case of alarm being triggered 2.3. Kiln is loaded with racks selected for processing and loading is completed and reported 2.4. Baffles and/or blankets are positioned in line with standard operating procedures
3. Monitor kiln conditions	3.1. Moisture content is measured, monitored and routinely compared with anticipated levels in line with the drying plan, whilst observing standard operating procedures 3.2. Kiln control settings are regularly adjusted and routinely checked to site drying schedules 3.3. Kiln charge is monitored for drying degrade and reconditioning or high humidity treatment conducted as required
4. Check timber quality on completion of drying	4.1. Drying end point is identified and kiln made safe for entry 4.2. Kiln is opened and moisture content of processed timber checked in line with anticipated target moisture content 4.3. Drying stresses samples are prepared and measured as suitable for target use 4.4. Unsuitable drying stresses are rectified 4.5. Drying quality is visually assessed and sub-standard material is rejected and disposed of in line with site and environmental requirements
5. Unload kiln and move or store timber	5.1. Moisture probes and baffles and/or blankets are removed from timber in line with standard operating procedures 5.2. Timber is directed and moved to storage or processing operations and packs are labelled in line with site requirements 5.3. Work area is cleaned in line with site requirements 5.4. Records and reports are completed for appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to dry timber, use and maintain relevant tools, machinery and equipment, including using moisture measuring techniques
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to calculate moisture content; estimate timber volumes and weights and analyse statistical data
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislative, regulatory or certification requirements and codes of practice relevant to the full range of processes for drying timber
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for drying timber
- Energy efficiency and savings obtained from various types of solar kilns
- Established communication channels and protocols
- Problem identification and resolution
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Species identification for a range of timbers likely to be encountered
- Drying techniques including development and relief of drying stresses
- Operation of solar assisted kilns
- Types of timber degrades and how it develops
- Basic knowledge of wood-water relationships in the drying process
- Methods of visual inspection
- Characteristics of timber
- Quality and distribution processes
- Storage systems and labelling
- Appropriate mathematical procedures for estimation and measurement
- Procedures for the recording, reporting and maintenance of workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently dry timber in solar assisted kilns to appropriate moisture contents and stress levels whilst keeping degrade to a minimum

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to drying timber in solar assisted kilns
- following organisational policies and procedures relevant to drying timber in solar assisted kilns
- consistently achieving target end moisture contents with acceptable levels of drying degrade
- selecting appropriate timber drying schedules for a range of species and products

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

- Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and

RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard identification and risk control
- fatigue management
- elimination of hazardous materials and substances
- knowledge of biohazards applicable to drying timber in solar kilns
- manual handling including shifting, lifting and carrying
- kiln entry requirements
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- sustainability certification schemes
- procedural manuals
- quality and continuous improvement processes and standards

RANGE STATEMENT

- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Timber may include:

- native timber species
- imported timber species
- preservative treated timber

Work order is to include:

- instructions for the drying of timber

and may include:

- species
- colour
- type
- width
- length
- thickness
- quantity
- target moisture content
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- supervisors
- suppliers
- clients
- colleagues
- managers

Appropriate personnel may include:

Drying

is the process of removing water from timber whilst minimising degrade until it reaches a target moisture content suitable for intended use

Conversion process may include:

- sawing process
- yard storage
- shed or other kiln storage
- delivery of material to the kiln site

Racks

are packets of timber with racking sticks between each row of boards to facilitate evaporation of

RANGE STATEMENT

	water from the timber
Visual assessment is to include:	<ul style="list-style-type: none">• the assessment of materials to determine stacking quality and faults
	and may include:
	<ul style="list-style-type: none">• stability• squareness of ends• spacing of strips• support to minimise warping
Equipment must include:	<ul style="list-style-type: none">• solar assisted kilns• procedures for equipment lock-out and safe entry, i.e. protecting operators and co-workers from accidental injury by isolating the machinery from the power source
	and may include:
	<ul style="list-style-type: none">• supplementary heat plant• forklift or loader• traverser and trolley
Sample Boards	are boards selected to be used to monitor moisture loss during the drying process
Moisture content	is the amount of moisture in timber at any given time
	and must include:
	<ul style="list-style-type: none">• assessment via capacitance, resistance and oven-dry methods
Drying plan	is the anticipated process the timber will undergo to remove moisture to target moisture content
	and may include:
	<ul style="list-style-type: none">• air drying• sheltered air drying• pre-drying• reconditioning• high humidity treatments• final kiln drying• equalising• conditioning
Communication may include:	<ul style="list-style-type: none">• verbal and non-verbal language• constructive feedback

RANGE STATEMENT

- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- electronic alarm, alert and notification systems associated with the kiln control software

Pre start-up checks

are conducted to ensure equipment has been set-up correctly, the systems are performing accurately and equipment is operating to optimum performance

Emergency shutdown

is the immediate shutting off of the equipment to prevent an accident or prevent damage to the machine or product

Kiln

See *equipment*

Baffles and/or blankets

are to assist in the drying process by directing air flow

Drying schedule

is the drying set points based on moisture content, moisture loss or time

Drying degrade may include:

- surface checks
- internal checks
- end splits
- collapse
- excessive distortion
- bow
- spring
- twist
- cup
- case Hardening

Drying end point

is the point in time when the drying process will be completed and the target moisture content achieved

Target moisture content

is the moisture content the kiln operator is trying to obtain from any given batch of timber

Drying stresses

are stress levels that develop through the drying process likely to affect timber performance in

RANGE STATEMENT

	service
Rectified	refers to the amelioration of excessive drying stresses and may include: <ul style="list-style-type: none">• high humidity treatments• conditioning• re-drying• letting timber equalise• See <i>drying degrade</i>
Sub-standard material	<ul style="list-style-type: none">• processing to a lower grade of product• recovery of heat value• recovery as ungraded product
Disposal may include:	
Moisture probes	are probes pierced into representative boards which provide moisture readings to assist in monitoring the drying schedule and may include <ul style="list-style-type: none">• resistance or electromagnetic property probes
Movement of material may include:	the use of: <ul style="list-style-type: none">• conveyor belt systems• track systems or lifting equipment lifting equipment may include: <ul style="list-style-type: none">• fork lifts• slings• trolley jacks• gantry cranes and loaders• cross transfer trucks assistance with lifting may include the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment
Storage may include:	the use of: <ul style="list-style-type: none">• storage racks• storage bays• stacks• modularised storage components

RANGE STATEMENT

- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size, dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Cleaning

- sweeping
- removing debris
- removing rust build up

Records and reports may include:

- moisture content achieved
- drying schedule used
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents or equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3249A Select timber preservation techniques

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to select timber preservation techniques taking into account the principles of environmental suitability and sustainability

General workplace legislative and regulatory requirements apply to this unit. Subject to enterprise requirements specific licences/certification may be required in the following areas: forest sustainability certification, chain of custody certification, TUMA and the NSW Timber Marketing Act, Environmental Protection Authority certification

Application of the Unit

Application of the unit

The unit involves selecting timber preservation techniques in a variety of settings including

- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- timber and wood products production

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Determine preservation requirements for timber | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to selecting timber preservation techniques are identified and followed
1.2. <i>Environmental legislative requirements</i> relevant to timber preservation are ascertained and followed
1.3. <i>Service requirements</i> for timber are established and followed
1.4. Required <i>chemical retention rates</i> are identified and suitable solution strengths calculated
1.5. Required <i>penetration patterns</i> are recognised |
| 2. Decide on appropriate | 2.1. <i>Preservation techniques</i> are investigated to determine available options that would be consistent |

ELEMENT	PERFORMANCE CRITERIA
preservation technique/s for timber	with job requirements and the principles of environmental suitability and sustainability
	2.2. Options are reviewed and compared for suitability and value
	2.3. Appropriate preservation technique/s are selected for use
	2.4. <i>Water management procedures</i> are identified and followed
	2.5. <i>Contingency management plans</i> are developed
	2.6. <i>Quality assurance procedures</i> are implemented and communicated to operators
	2.7. <i>Environmental monitoring requirements</i> are determined and established

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to identify a range of suitable chemicals and assess their environmental impact
- Communication skills sufficient to establish and communicate contingency plans for operations
- Literacy skills sufficient to research literature and compare techniques
- Numeracy skills sufficient to calculate chemical solution strengths, timber and fluid volumes; measure chemical salt retention rates
- Problem solving skills sufficient to evaluate a range of timber preservation techniques and select the most appropriate technique for the end application

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice and established safe practices relevant to the full range of processes for selecting timber preservation techniques
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), environmental monitoring required for preservation equipment, the safe use and storage of chemicals and minimising

REQUIRED SKILLS AND KNOWLEDGE

carbon emissions

- Organisational and site standards, requirements, policies and procedures for preserving timber and selecting timber preservation techniques
- Environmental risks and hazards
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Wood technology
- Range of timber preservation chemicals
- Range of timber preservation techniques
- Appropriate timber preservation Australian Standards and market requirements, particularly Australian Standard (AS) 1604.1-2010 Specification for preservative treatment - Sawn and round timber and in Queensland, the Queensland Timber Utilisation and Marketing Act
- Appropriate timber hazard levels in service
- Range of timber preservation plants and their operating techniques
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating chemical solution strengths and retention rates
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently select timber preservation techniques suitable for timber requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to selecting timber preservation techniques
- following organisational policies and procedures relevant to selecting timber preservation techniques
- following environmental requirements for operating preservation equipment
- determining preservation requirements for timber
- selecting appropriate preservation techniques for timber
- identifying relevant water management procedures
- developing a contingency management plan
- implementing quality assurance procedures
- establishing environmental monitoring requirements
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Context of and specific resources for assessment

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the required

EVIDENCE GUIDE

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- handling and storage of appropriate dangerous goods and hazardous substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling)

RANGE STATEMENT

	and re-use guidelines)
Environmental legislative requirements may include:	<ul style="list-style-type: none"> • Environmental Protection Authority requirements • water monitoring requirements • plant design requirements
Service requirements must include	<ul style="list-style-type: none"> • treated timber hazard ratings • marine borer hazard ratings • timber durability ratings
Chemical retention rate/s	is the amount of preservative retained in a piece of timber after treatment and fixation have taken place expressed as either weight for volume or weight for weight
Penetration pattern/s	is the distribution of preservative within the cross section of a treated piece of timber
Preservation techniques:	<ul style="list-style-type: none"> • are the range of pressure and non-pressure techniques used to preserve timber <p>and must include:</p> <ul style="list-style-type: none"> • full cell (Bethel) process • empty cell process • rueping process • double treatment • boultonising • discussion of research into emerging techniques
Water management procedures may include:	<ul style="list-style-type: none"> • ground water monitoring • bund storages • contaminated water containment • contaminated water reuse • drip pads
Contingency management plans may include:	<ul style="list-style-type: none"> • chemical handling and spill procedures • groundwater leakage procedures • fire suppression procedures • emergency evacuation procedures
Quality assurance procedures may include:	<ul style="list-style-type: none"> • quality assurance manual • process documentation • training documentation • emergency documentation
Environmental monitoring	<ul style="list-style-type: none"> • groundwater monitoring • chemical disposal

RANGE STATEMENT

- requirements** may include:
- residue disposal
 - dust
 - noise

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3250A Prepare timber to meet import/export compliance requirements

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to ensure timber meets compliance requirements for import/export

General workplace legislative and regulatory requirements apply to this unit. Subject to enterprise requirements specific licences/certification may be required in the following areas: forest sustainability certification, chain of custody certification, phytosanitary certification and other Australian Quarantine and Inspection Service (AQIS) requirements

Application of the Unit

Application of the unit The unit involves assessing timber for import/export requirements in a variety of work settings including:

- timber harvesting
- sawmill
- woodchip mill
- veneer mill
- board/plywood mill
- timber and wood products production
- timber and wood products sales and service

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Review regulatory requirements for import/export of timber | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>legislative, environmental</i> and <i>organisational requirements</i> relevant to preparing timber to meet import/export compliance requirements are identified and followed
1.2. <i>AQIS requirements</i> relevant to timber import/export are identified
1.3. Specific <i>environmental legislative requirements</i> relevant to timber import/export are identified
1.4. Compliance requirements are interpreted and confirmed
1.5. Compliance requirements for the organisation are examined in terms of critical implications, risks and consequences of possible breaches |
| 2. Ensure timber | 2.1. Timber for import/export is identified and <i>wood</i> |

ELEMENT	PERFORMANCE CRITERIA
compliance for import/export	<p><i>properties</i> are recognised</p> <p>2.2. Timber is examined, <i>biohazards</i> associated with the particular species identified and a risk assessment undertaken</p> <p>2.3. Need for <i>timber treatment</i> is determined and arrangements made for treatment to ensure compliance</p> <p>2.4. Need for <i>phytosanitary certificates</i> is established and arrangements made for procurement</p>
3. Document compliance requirements	<p>3.1. <i>Branding</i> of timber is completed and checked in line with regulatory requirements</p> <p>3.2. <i>Forest certification</i> records are obtained and forwarded to relevant authorities</p> <p>3.3. <i>Records and reports</i> of compliance requirements are prepared and submitted to appropriate internal and external personnel</p> <p>3.4. Breaches of compliance requirements are reported to those with sufficient authority to correct them</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to identify timber species, wood properties and a range of timber biohazards
- Communication skills sufficient to complete process documentation; liaise with AQIS and customs officials; liaise with customers and suppliers, sometimes from different countries and cultures
- Literacy skills sufficient to read and interpret import/export requirements
- Numeracy skills sufficient to calculate timber volumes, costs and treatment strengths
- Problem identification and resolution skills sufficient to negotiate outcomes with officials and customers

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice and established safe practices relevant to the full range of

REQUIRED SKILLS AND KNOWLEDGE

processes for identifying timber import and export requirements including knowledge of customs and AQIS requirements

- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for identifying timber import and export requirements
- Environmental risks and hazards
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Timber species identification techniques
- Wood properties and how these relate to fungal and insect risks associated with importing/exporting timber
- Range of timber treatments meeting AQIS requirements
- Branding and labelling requirements to ensure compliance
- Forest certification systems and chain of custody procedures
- Established communication channels and protocols
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can correctly prepare timber to meet import/export compliance requirements within Australia

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and

EVIDENCE GUIDE

<p>Context of and specific resources for assessment</p>	<p>codes of practice relevant to importing/exporting timber</p> <ul style="list-style-type: none"> • following organisational policies and procedures relevant to importing/exporting timber • interpreting regulatory requirements for importing/exporting timber in Australia • determining compliance requirements for the organisation in relation to importing/exporting timber, and the risks and consequences of breaches • examining timber and determining the appropriate requirements for compliance • ensuring appropriate arrangements are made for compliance • completing all documentation related to compliance • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies • Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge • Assessment may be applied under project-related conditions (real or simulated) and require evidence of

EVIDENCE GUIDE

process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances

RANGE STATEMENT

- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

AQIS requirements may include:

- various treatments of the timber
- issuing of phytosanitary certificates
- chain of custody records

RANGE STATEMENT

Environmental legislative requirements may include:

- identification of biohazards
- forest certification system
- identification of hazardous chemicals
- risk assessment of material to be imported or exported

Wood properties may include:

- strength
- durability
- hardness
- shrinkage
- moisture content
- grain
- texture
- presence of susceptible sapwood
- extractives
- fibre length and orientation

Biohazards may include:

- pests and diseases with potential for immediate and long-term threats to health or ecosystems

Timber treatment may include:

- heat treatment
- chemical treatment
- fumigation
- irradiation
- sterilisation

Phytosanitary certificates

are certificates issued certifying absence of active insect and fungal attack in timber to be imported or exported

Branding

is the process of labelling treated timber to assure customers of treatment

Forest certification

- is certification that material is from sustainably managed forests

and may include:

- Australian Forestry Standard
- Forest Stewardship Council
- chain of custody records

Records and reports may include:

- AQIS records
- Customs records
- import/export documentation
- chain of custody documentation

RANGE STATEMENT

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3251A Promote the carbon benefits of wood products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to apply knowledge of carbon capture and storage to promote the carbon benefits of wood products to customers in a timber merchandising environment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves identifying and promoting the carbon benefits of wood products in a timber merchandising environment including:

- forest environment
- hardwood and softwood plantation environment
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- timber and wood products production
- timber and wood products sales and service

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Recommend the carbon benefits of wood products | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to promoting the carbon benefits of wood products are identified and followed</p> <p>1.2. Range of <i>wood products</i> is identified using common industry terminology</p> <p>1.3. <i>Process of carbon capture and storage</i> in wood products is outlined</p> <p>1.4. Approximate <i>carbon storage</i> figures for a range of wood products are compared</p> <p>1.5. Knowledge of carbon capture and storage in wood products is used to provide advice to customers on available product range and their carbon storage figures</p> |
|---|--|

ELEMENT	PERFORMANCE CRITERIA
	1.6.Product information is provided to customers to assist them in their purchasing decisions
2. Produce and install merchandise for a promotion on the carbon benefits of wood products	2.1.Targets for a promotional campaign on the carbon benefits of wood products are identified
	2.2.Merchandising plan is produced for the campaign using sales information that will strategically target customer buying habits
	2.3.Range of <i>promotional elements</i> are designed for use in the campaign
	2.4.Promotional elements and installation concepts are presented for approval
	2.5.Materials are constructed to match the designed elements
	2.6.Promotion is installed and dismantled at the work site
	2.7. <i>Customer feedback</i> checks are developed and implemented to measure the effectiveness of the promotional campaign and gauge customer response

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to understand how trees capture and store carbon
- Communication skills sufficient to explain carbon capture and storage to customers
- Literacy skills sufficient to help write a promotional campaign and evaluation documentation
- Numeracy skills sufficient to understand input and output figures, and calculate potential carbon storage of wood products
- Problem solving skills sufficient to apply the promotional campaign and identify improvement opportunities

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for promoting the carbon benefits of wood products
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

material

- Organisational and site standards, requirements, policies and procedures for promoting the carbon benefits of wood products
- Environmental risks and hazards
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- How trees capture and store carbon
- Principles of developing a promotional campaign
- Continuous improvement processes and systems
- Established communication channels and protocols
- Problem identification and resolution strategies; common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for calculating approximate carbon storage of wood products
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can promote the carbon benefits of wood products to customers in a timber merchandising environment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to promoting the carbon benefits of wood products
- following organisational policies and procedures relevant to promoting the carbon benefits of wood

EVIDENCE GUIDE

Context of and specific resources for assessment	<p>products</p> <ul style="list-style-type: none"> • providing advice to customers on available product range and their carbon storage figures • recommending wood products to customers • preparing a campaign to promote the carbon benefits of wood products <ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies • Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge • Assessment may be applied under project-related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency • The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

RANGE STATEMENT

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Wood products: describe any wood or wood composite material and may include:

- hardwood logs, poles, piles, stringers, other round products
- softwood logs, poles, piles, roundwood products
- sawn timber
- structural timber
- non-structural timber
- treated timber

RANGE STATEMENT

- plywood and veneer
- particle board and MDF
- flooring
- wood panelling
- mouldings
- glulamated beams
- engineered timber

Process of carbon capture and storage is the process trees use to capture and fix carbon from the atmosphere into wood

Carbon storage is the amount of carbon stored in a timber product

Promotional elements may include:

- visual display
- product information

Customer feedback may include:

- verbal
- questionnaire

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3252A Use environmental care procedures to undertake fire salvage operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to undertake tree salvaging following forest fires, in line with a salvage plan that incorporates effective environmental procedures and sustainability principles

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves undertaking environmentally effective and sustainable tree salvaging operations in a fire salvage environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify environmental care requirements	<p>1.1. Applicable Occupational Health and Safety (OHS), environmental, legislative and organisational requirements relevant to following environmental care practices in completing fire salvage operations are identified and followed</p> <p>1.2. Work order is reviewed and environmental care requirements are identified and clarified with appropriate personnel</p> <p>1.3. Existing and potential environmental risks and hazards are identified and reported to relevant personnel</p>
2. Prepare for fire salvage operations	<p>2.1. Schedule for salvaging is reviewed and confirmed with appropriate personnel</p> <p>2.2. Operational activities are identified</p> <p>2.3. Preliminary site work is confirmed</p> <p>2.4. Tree location and stability are assessed for conditions likely to effect safety and merchandising priorities</p> <p>2.5. Equipment is selected appropriate to work and environmental care requirements in line with workplace procedures</p> <p>2.6. Equipment is checked for effectiveness in line with manufacturer's specifications</p> <p>2.7. Planning permits and access permission are confirmed</p> <p>2.8. Communication with others is established and</p>

ELEMENT	PERFORMANCE CRITERIA
	maintained in line with OHS requirements
3. Perform fire salvage operations in line with environmental care requirements	3.1.Movement and whereabouts of personnel are monitored 3.2.Pre-harvesting environmental care requirements are undertaken 3.3.Designated trees are salvaged in line with salvage plan 3.4.Heads and non-merchantable stems are dispersed or otherwise handled in line with work order 3.5.Logs are hauled to log landings and landscape left in safe condition suitable for regeneration
4. Complete documentation	4.1.Product volumes are tallied and recorded in departing salvage site 4.2.Variations are reported in line with workplace procedures 4.3.Environmental care procedures are recorded and reported in line with workplace procedures 4.4.Breaches or potential breaches of relevant environmental regulations are reported in line with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use harvesting plant and equipment; undertake advanced chainsaw harvesting techniques; undertake advanced 4WD operations
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation; use standard VHF&UHF radios, GPS systems; read topographic maps; effectively assess salvage operation requirements including fire damage
- Problem solving skills sufficient to identify problems and faults in plant and equipment; demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for using environmental care procedures to undertake fire salvage operations

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material, the cleaning of plant, tools and equipment, returning the environment to its original or near to original condition on completion of activity and minimising noise
- Organisational and site standards, requirements, policies and procedures for using environmental care procedures to undertake fire salvage operations
- Environmental risks and hazards
- Minimising environmental impact
- Using material effectively and efficiently
- Principles of ecological sustainability as they pertain to the specific forest type, landscape and fire regime to which the coupe or forest is exposed
- Characteristics of trees and timber defects
- Assessment of fire damaged trees
- Fire salvage operations and strategies
- Harvesting and extraction methods
- Established communication channels and protocols including notification of authorities
- Problem identification and resolution strategies in relation to plant and equipment used in salvage operations
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimation and measurement
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently use environmental care procedures to undertake fire salvage operations

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:
- following applicable Commonwealth, State or Territory legislative and regulatory requirements and

EVIDENCE GUIDE

	<ul style="list-style-type: none">codes of practice relevant to fire salvage operationsfollowing organisational policies and procedures relevant to environmental care requirementsassessing salvage operation requirements including fire damagepreparing for fire salvage operationsperforming a fire salvage operation in line with environmental care requirementsrecording and reporting all information and data related to the fire salvage operationusing safe work practicessafely using plant and equipment associated with fire salvage operations, including:<ul style="list-style-type: none">harvesting plant and equipmentadvanced chainsaw harvesting techniquesadvanced 4WD skills
Context of and specific resources for assessment	<ul style="list-style-type: none">Competency is to be assessed in the workplace or realistically simulated workplaceAssessment is to occur under standard and authorised work practices, safety requirements and environmental constraintsAssessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site contextAssessment is to comply with relevant regulatory or Australian Standards requirementsThe following resources should be made available:<ul style="list-style-type: none">workplace location or simulated workplacematerials and equipment relevant to undertaking work applicable to this unitspecifications and work instructions
Method of assessment	<ul style="list-style-type: none">Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training PackageAssessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledgeAssessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competenciesAssessment methods must confirm the ability to access and correctly interpret and apply the required knowledge

EVIDENCE GUIDE

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment

RANGE STATEMENT

- hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
 - use of tools and plant appropriate to a task and used to safe working procedures
- Environmental requirements may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:
- are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - procedural manuals
 - continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards

RANGE STATEMENT

Work order must include:

- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- instructions for the trimming, felling and despatching of salvaged trees, including merchandising
- directions on the treatment of non-merchantable trees and debris for the purpose of environmental care and site rehabilitation
- prescriptions for maintenance of soil and water
- wet weather restrictions

and may include:

Environmental care requirements may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- any activities and directives prescribed under legislation or required for standard certification requirements or as a management priority such as:
 - soil erosion mitigation
 - track, road, drainage and crossing maintenance
 - weed management
 - rehabilitation prescriptions
 - watercourse protection
 - flora and fauna management
 - run-off minimisation
 - buffer zone and filter strip maintenance
 - protection of remnant habitat
 - identification of cultural sites

RANGE STATEMENT

Appropriate personnel may include:

- managers
- supervisors
- foremen
- operational staff
- administrative staff
- sub contractors
- clients

Environmental risks and hazards may include:

- spills
- leaks
- pollution
- planned and unplanned emissions
- soil compaction
- disturbance and erosion
- accidents
- disposal of waste
- damage or disruption to ecosystems
- displacement of plant or animals
- changes in land use
- fire risks and threats
- damage to habitats
- illegal vegetation clearing
- seed collection
- firewood gathering

Schedule is to include:

- plan
- timeline
- list of events to take place in conducting fire salvage operations

Operational activities may include:

- coupe mapping exercises
- site preparation
- establishment of stream or water course buffers, filter strips, contours, gullies, crossing and other landscape protection
- habitat, plant community, forest type protection
- fauna and flora protection
- timber dump
- snig track
- forwarding tracks
- temporary and permanent road

RANGE STATEMENT

- construction, use or maintenance
- fire management
- wet weather restrictions

and may be modified according to:

- weather conditions
- seasonal activity
- time frames
- condition of fire affected coup
- accessibility

Stability must include:

assessment of a tree to determine:

- whether or not it is safe to leave standing
- its merchantability
- how it should be felled

Equipment may include:

- chainsaws
- VHF&UHF radios
- GPS systems
- safety attire
- 4WD
- harvesting plant and equipment

Communication may include:

- verbal or non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices
- radio communication
- signals used under fire management conditions

Salvage

is the process of removing from a site, commercially viable trees that have been damaged by fire in such a way that leaves the site in a state of protection against further loss or damage to natural resources and in a state that rehabilitation can occur

RANGE STATEMENT

Regeneration must include:

- return of the area to a revegetated state
- protection of all environmental assets

Records and reports may include:

- OHS policies and procedures
- quality outcomes
- hazards
- incidents
- equipment malfunctions
- and may be:
- manual
- computer based, or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT3253A Convert timber residue into products for further use

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to convert timber residue from a process into products designed for further use

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves converting timber residue in a variety of settings including:

- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- timber and wood products production

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for residue conversion processing operation

- 1.1. Applicable ***Occupational Health and Safety*** (OHS), ***environmental, legislative*** and ***organisational requirements*** relevant to operating machinery, grading ***residue*** and handling material are identified and followed
- 1.2. Timber residue product outcome is identified and conversion process determined
- 1.3. ***Work order*** is reviewed and confirmed with appropriate staff
- 1.4. Timber residue is graded in line with conversion process requirements
- 1.5. ***Equipment*** is selected appropriate to work requirements and checked for effectiveness in line with manufacturer's specifications
- 1.6. Timber residue is ***transferred*** and ***stored*** in line with material handling specifications and chain of custody priorities
- 1.7. ***Communication*** with others is established and maintained in line with OHS requirements

ELEMENT	PERFORMANCE CRITERIA
2. Undertake conversion process to produce timber products	2.1. Work procedures are followed in line with OHS, environmental, legislative and residue output obligations and specifications 2.2. Product specifications and quality standards are confirmed, and plant and equipment set to ensure outputs are compliant with product specifications and environmental standards 2.3. Plant and equipment is operated in line with OHS standards, environmental requirements and manufacturer's specifications 2.4. Process is monitored, ensuring inputs and outputs are compliant with product specifications and environmental requirements 2.5. Waste is monitored, contained and <i>disposed of</i> in line with environmental and legislative requirements and organisational protocols 2.6. Products are inspected to ensure they meet work order 2.7. Products are transferred and stored in line with material handling specifications and chain of custody priorities
3. Record outputs	3.1. Product volumes and any associated additives required for conversion to a marketable product are tallied and quantity surveyed 3.2. Outputs for quality control and certification purposes are <i>recorded and reported</i> 3.3. <i>Variations are reported in line with organisational requirements</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely grade and process wood and timber residue
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation; read work orders; follow legislation, regulations, standards, codes of practice and established safe practices and procedures, for screening wood or timber residue
- Numeracy skills sufficient to accurately tally and quantity-survey wood and timber residue products
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for converting timber residue for further use
- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber), the safe use and storage of chemicals and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for grading and handling wood and timber residue
- Environmental risks and hazards
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Product grading techniques and assessment
- Characteristics of wood chips and stock levels
- Chip production process
- Timber production processes
- Storage systems and labelling
- Alternative products for timber residue
- Established communication channels and protocols
- Problem identification and resolution
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimation and measurement
- Procedures for the recording, reporting and maintenance of workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

EVIDENCE GUIDE

Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently convert timber residue for further use

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to converting timber residue
- following organisational policies and procedures relevant to converting timber residue
- reading work order to establish conversion process requirements
- converting timber residue into marketable products in line with product specifications and environmental requirements
- monitoring, containing and disposing of waste in line with environmental legislation and organisational protocols
- transferring and storing timber residue and products in line with chain of custody priorities
- reporting and recording information relevant to the conversion process

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard identification and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards

RANGE STATEMENT

- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Residue may include:

- bark
- green chip and sawdust
- dry chip and sawdust
- resin and tannin extractives
- log peeler cores and veneer off-cuts
- particle board and MDF off-cuts
- treated boards
- treatment solution

Work order must include:

- machine operating procedures specific to product and product quality standards
- product quality guidelines
- product processing guidelines
- packaging and/or shipping requirements

and may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Equipment may include:

- processing plant
- hand tools
- transfer systems
- chippers
- washing plants
- aggregate sorters

Transfer may include:

- initial production process
- conversion process
- chemical alteration

Storage may include:

- hopper
- pallets
- yard
- warehouse
- dumps

RANGE STATEMENT

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Disposing of may include:

- recycling waste
- re-using waste
- redirecting waste for energy recovery

Records and reports may include:

- product type
- size
- profile
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- incidents
- hazards
- equipment malfunctions

and may be:

- manual
- or by using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3254A Implement environmentally sustainable work practices in the work area/work site

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to consider the environmentally sustainable work practices of the work site or work area, to identify opportunities for improvement, and gain support to put them into action

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves implementing and monitoring environmentally sustainable work practices, including developing processes and tools in operations of all sizes in a variety of work settings, including:

- forest environment
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plant
- downstream processing of timber
- forest products factory
- forest products sales and service
- horticultural setting
- local council
- emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Examine work site/work area in relation to environmentally sustainable work practices | 1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to implementing environmentally sustainable work practices in the work site/work area are identified and followed |
| | 1.2. Information on environmental and resource efficiency systems and procedures is sourced |
| | 1.3. Current resource usage is measured and documented |
| | 1.4. Current <i>purchasing strategies</i> are investigated and documented |
| | 1.5. Current work processes are examined to assist in |

ELEMENT

PERFORMANCE CRITERIA

- identifying areas for improvement
2. Set targets for improvement
 - 2.1. Input from *stakeholders, appropriate personnel and specialists* is sought in providing solutions for work site/work area environmental issues
 - 2.2. Alternative solutions to work site/work area environmental issues are considered and communicated to appropriate personnel
 - 2.3. Environmental and resource efficiency targets are set
 - 2.4. *Environmental and resource efficiency improvement plan* for work site/work area is developed
 3. Implement environmental and resource efficiency improvement plan
 - 3.1. Appropriate techniques and tools to assist in achieving efficiency targets are sourced
 - 3.2. Environmental and resource efficiency improvement plan is integrated and implemented with other operational activities
 - 3.3. Suggestions and ideas about environmental and resource efficiency management are sought from appropriate personnel and stakeholders, and acted upon where appropriate
 4. Monitor performance
 - 4.1. Outcomes to report on efficiency targets are documented and communicated to appropriate personnel and stakeholders
 - 4.2. Targets and environmental and resource efficiency improvement plan are reviewed
 - 4.3. New efficiency targets are set, and new tools and strategies applied where appropriate
 - 4.4. Successful strategies are promoted and where possible, participants rewarded

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use software systems for recording and filing documentation; use word processing and other software for interpreting charts,

REQUIRED SKILLS AND KNOWLEDGE

flowcharts, graphs and other visual data and information

- Communication skills and interpersonal techniques sufficient to interact appropriately with stakeholders, colleagues and others in the workplace
- Literacy skills sufficient to analyse, document, report and maintain workplace information and data
- Numeracy skills sufficient to access and analyse workplace information and data
- Problem solving skills sufficient to identify and analyse problems; demonstrate appropriate response procedures
- Planning and organising skills sufficient to implement environmental and resource efficiency improvement plan to own work site/work area

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for implementing and monitoring environmentally sustainable work practices in the work site or work area
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of carbon emissions and noise, the cleaning of plant, tools and equipment, and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures associated with environmentally sustainable work practices
- Environmental risks and hazards
- Procedures for minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Relevant environmental and resource efficiency issues specific to industry practices
- Workplace communication channels, protocols and procedures
- Organisational structure and reporting channels
- Workplace safety and emergency procedures
- Strategies to maximise opportunities and minimise impacts relevant to own work area
- Problem identification and resolution strategies; common fault finding techniques
- Types of tools and equipment, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can implement and monitor environmentally sustainable work practices in the forest and forest products industry

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to implementing environmentally sustainable work practices in the work site/work area
- following organisational policies and procedures relevant to implementing and monitoring environmentally sustainable work practices in the work site/work area
- developing environmental and resource efficiency improvement plans to meet efficiency targets
- implementing new approaches to work, in an effort to resolve and improve environmental and resource efficiency issues
- monitoring targets and improvements for environmental and resource efficiency relative to work site/work area

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE

Method of assessment

- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised**

RANGE STATEMENT

wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- legal

Organisational requirements

RANGE STATEMENT

may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting
- equipment use, maintenance and storage
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Purchasing strategies may include:

- influencing suppliers to take up environmental sustainability approaches
- researching and participating in programs, such as a supply chain program to purchase environmentally sustainable products

Stakeholders, appropriate personnel and specialists may include:

- individuals and groups both inside and outside the organisation who have direct or indirect interest in the organisation's conduct, actions, products and services, including:
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
 - safety officers
 - government
 - investors
 - local community
 - other organisations

Environmental and resource efficiency improvement plans may include:

- specialists outside the organisation who may have particular technical expertise
- addressing environmental and resource sustainability initiatives, such as:
 - environmental management systems
 - action plans
 - surveys
 - audits

RANGE STATEMENT

- determining organisation's most appropriate waste treatment, including:
 - waste to landfill
 - recycling
 - re-use
 - recoverable resources
 - wastewater treatment
- initiating or maintaining appropriate organisational procedures for operational energy consumption, including stationary energy and non-stationary energy (transport)
- reducing use of non-renewable resources
- reference to standards, guidelines and approaches, such as:
 - ecological footprinting
 - Global Reporting Initiative
 - ISO14001 Environmental Management System
 - life cycle analyses
 - product stewardship
 - supply chain management
 - triple bottom line reporting

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT3255 Apply silviculture principles

Modification History

Version	Detail
1	New unit

Unit Descriptor

This unit describes the outcomes required to access, interpret and apply sustainable silvicultural principles to native forests.

Application of the Unit

This unit involves following legislation, an appropriate management regime, and industry-acceptable criteria to identify target species, and the selection and retention of merchantable trees during native forest operations.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit.

Pre-Requisites

Not applicable

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT

Elements describe the essential outcomes of a unit of competency.

PERFORMANCE CRITERIA

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge section and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

1 Access and interpret silvicultural principles in legislation and organisational procedures	<p>1.1 Identify and review information on <i>occupational health and safety</i> (OHS), environmental, <i>regulatory requirements</i> and <i>organisational requirements</i> relevant to sustainable native forest operations for <i>various forest types</i></p> <p>1.2 Identify and interpret key principles and requirements that apply to sustainable <i>silvicultural methods and techniques</i></p> <p>1.3 Identify target species in line with approved forest operational plan and organisational procedures</p>
2 Assess forest condition	<p>2.1 Review work order and identify and clarify sustainable native forest requirements with <i>appropriate personnel</i></p> <p>2.2 Select and use appropriate techniques and tools to measure tree and stand height</p> <p>2.3 Calculate basal area and assess tree dominance and crown vigour using an approved industry process</p> <p>2.4 Determine and record standing tree defects</p> <p>2.5 Identify and mark merchantable trees in line with organisational procedures</p>
3 Implement silvicultural practices	<p>3.1 Calculate and apply tree retention and stocking criteria according to legislative requirements and operational plan</p> <p>3.2 Select appropriate silvicultural methods and techniques to meet environmental and production requirements</p> <p>3.3 Identify situations requiring specialist advice and seek assistance in line with organisational requirements</p>
4 Monitor work practices to ensure compliance with legislation	<p>4.1 Monitor and adjust work practices to meet <i>changing conditions</i></p> <p>4.2 Monitor and maintain sustainable native forest practices in line with relevant legislation, codes of practice and organisational requirements</p> <p>4.3 Identify and report non-compliant work practices to appropriate personnel</p> <p>4.4 Identify improved work practices and recommend improvements in line with organisational continuous improvement procedures</p>
5 Maintain records	<p>5.1 Revise and update forest operational plan and organisational procedures as required</p>

5.2 Complete relevant *documentation and reporting* processes according to relevant legislation, codes and organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- Literacy skills to:
 - locate, read, interpret and convey information in written, diagrammatic and/or verbal form
 - complete and maintain workplace documentation and reports
- Technical skills to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques to interact appropriately with colleagues and others in the workplace
- Numeracy skills to measure, calculate and estimate material quantities and time required to complete a task
- Problem-solving skills to:
 - identify problems and equipment faults and demonstrate appropriate response procedures
 - review and interpret work requirements

Required knowledge:

- Federal, state and territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of practising sustainable silviculture in a native forest
- Environmental protection requirements and minimal impact strategies to support the implementation of silviculture practices
- Organisational and site standards, requirements, policies and procedures relevant to environmental care procedures
- Environmental policies and practices, risks and hazard identification relevant to silviculture
- Growth habits of specific species under a range of soil and environmental conditions
- Regeneration requirements of plant species being managed
- Soil conservation and erosion mitigation techniques and their advantages and disadvantages for specific sites and habitats
- Communication procedures and protocols
- Problem identification and common fault-finding techniques
- Procedures for recording and reporting workplace data and information

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Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment A person who demonstrates competency in this unit must be able to provide evidence that they can apply and monitor sustainable silvicultural principles in a native forest

Critical aspects for assessment and evidence required to demonstrate competency in this unit The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable federal, state or territory, and local government regulatory, environmental and OHS requirements, codes of practice and industry standards relevant to applying sustainable silvicultural principles
- following organisational policies and procedures relevant to implementing and monitoring sustainable silvicultural principles
- effective communication and safe work practices
- implementing best practice and industry-acceptable silvicultural practices
- monitoring and maintaining sustainable silvicultural procedures
- identifying and reporting non-compliant work practices
- completing relevant workplace documentation and reporting processes

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory requirements and Australian standards
- The following resources should be made available:

- workplace location or simulated workplace
- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

OHS requirements:

- are to be in line with applicable federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - safety management systems

- safe work procedures
- site safety plans and emergency evacuations
- the use of personal protective equipment (PPE) and clothing
- safety equipment
- first aid equipment
- firefighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- techniques for manual handling, including shifting, lifting and carrying
- machine guarding

- Regulatory requirements:**
- are to be in line with applicable legislation from all levels of government that affect sustainable silvicultural operations and may include:
 - environment protection and biodiversity conservation
 - silviculture codes and guidelines
 - ecological sustainability
 - environmental planning and assessment
 - threatened species conservation
 - critical habitat register
 - native vegetation
 - federal, state or territory forestry legislation and local government regulations
 - native forest legislation
 - forest operational plans
 - specific site environmental management plans
 - relevant codes of practice, including Safe Work Australia code of practice 'Managing Risks in Forest Operations'

- water catchment management
- surface and ground water conservation requirements
- relevant Australian and industry standards
- hazard reduction policy and procedures
- reforestation codes
- fisheries and fish passage
- National Parks and Wildlife legislation
- good neighbour policies
- duty of care
- heritage and traditional landowner requirements

Organisational

requirements may include:

- legal compliance documentation
- recording and reporting
- environmental management requirements, including waste minimisation and disposal, recycling and re-use guidelines
- operational plan, including organisation and site guidelines

Various forest types may include:

- coast and tableland native forests
- inland native forests and woodlands
- River Red Gum and river flood plain native forests
- tropical forests
- exotic plantations
- native plantations

Silvicultural methods and techniques may include:

- slash or harvesting residue burning
- scarification
- enhancement planting or supplementary planting
- fertilisation
- thinning
- pruning
- waste thinning and non-commercial thinning

- commercial thinning
- harvesting
- gapping

Appropriate personnel
may include:

- colleague
- leading hand
- bush boss
- foreman
- supervisor
- manager
- safety officer
- environmental officer

Changing conditions:

- are those conditions that can alter or change and therefore require different work strategies or practices to protect the native forest environment from an increased risk of harm and may include:
 - recently declared or potentially rare and endangered species identified
 - unexpected flora or fauna encountered
 - new or potential habitat
 - ecology or ecosystem changes
 - tree size, condition and species
 - undergrowth and ground cover
 - canopy
 - environmental features
 - operational conditions
 - ground conditions
 - weather conditions
 - wind
 - dust
 - smoke
 - fire
 - cultural sensitivity
 - forest type
 - land tenure
 - code of practice
 - quality of roads and tracks

Documentation and reporting may include:

- specific organisational records, reports and forms
- update of forest operational plan
- legislative compliance
- non-compliance reports
- operational inspection reports
- environmental audits
- environmental incident or accident reports
- reports on any threatened or endangered species of plant, animal or other organisms
- presence of unexpected flora and fauna
- information on habitats or landscape features
- exclusion zone amendments
- notifiable species list
- risk and hazard or potential hazard control measure reports
- timber felling and extraction records
- certification requirements
- incident or accident reports
- landing and snig track design
- road and crossing design
- on-site mill waste disposal
- drainage line and buffer zone specifications
- development operations
- heritage and traditional landowner reports
- work practice improvement recommendations, which may be manual or computer-based

Unit Sector(s)

Common Technical

Custom Content Section

Not applicable.

FPICOT3256 Apply biodiversity protection principles

Modification History

Version	Detail
1	New unit

Unit Descriptor

This unit describes the outcomes required to access, interpret and apply biodiversity principles and requirements in a forest environment, including monitoring work practices for compliance with the principles, and maintaining forest documentation and records.

Application of the Unit

This unit involves following ecological and biodiversity protection principles when identifying and protecting forest habitats, threatened species, microclimates and landscape features; or while conducting hazard-reduction procedures in an operational forest environment.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements may apply to this unit.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge section and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

1 Access and interpret ecological and biodiversity protection legislation and organisational procedures	<p>1.1 Identify and review information on <i>occupational health and safety</i> (OHS), environmental, <i>regulatory</i> and <i>organisational requirements</i> relevant to the application of ecological and biodiversity protection principles for <i>various forest types</i></p> <p>1.2 Identify and interpret key principles and requirements that apply to ecological and biodiversity protection</p> <p>1.3 Identify sensitive ecological and biodiversity sites, <i>habitats</i>, <i>landscape features</i> and <i>protection zones</i> in the forest <i>operational plan</i> and maps</p>
2 Implement biodiversity protection principles	<p>2.1 Review work order and identify and clarify ecological and biodiversity requirements with <i>appropriate personnel</i></p> <p>2.2 Identify endangered communities, <i>threatened species</i>, ecological habitats, sensitive landscape features and protection zones in the field</p> <p>2.3 Identify and report existing and potential ecological risks and hazards</p> <p>2.4 Apply protection measures for endangered communities, threatened species, ecological habitats and sensitive landscape features and protection zones in line with codes of practice and operational plan</p> <p>2.5 Select, apply and verify protection zone methods and materials with appropriate personnel</p> <p>2.6 Identify situations requiring specialist advice and seek assistance in line with organisational requirements</p>
3 Monitor work practices to ensure compliance with legislation	<p>3.1 Monitor and adjust work practices to meet <i>changing conditions</i></p> <p>3.2 Monitor and maintain ecological and biodiversity protection work practices in line with codes of practice and operational plan</p> <p>3.3 Identify and report non-compliant work practices to appropriate personnel</p> <p>3.4 Identify improved work practices and make recommendations in line with organisational continuous improvement procedures</p>
4 Maintain records	<p>4.1 Update operational plans as required with any new threatened species or habitat protection <i>prescriptions</i></p> <p>4.2 Complete relevant <i>documentation and reporting</i> processes</p>

in line with codes of practice and organisational requirements

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- Literacy skills to:
 - locate, read, interpret and convey information in written, diagrammatic and/or verbal form
 - complete and maintain workplace documentation and reports
- Technical skills to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques to interact appropriately with colleagues and others in the workplace.
- Numeracy skills to measure, calculate and estimate material quantities and time required to complete a task
- Problem-solving skills to:
 - identify problems and equipment faults and demonstrate appropriate response procedures
 - review, identify and interpret work requirements

Required knowledge:

- Federal, state and territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for ecological and biodiversity protection
- Environmental protection requirements, including the safe disposal of products and waste material
- Organisational and site standards, requirements, policies and procedures relevant to environmental care
- Environmental policies and practices, risks and hazard identification relevant to biodiversity protection
- Established communication channels and protocols
- Problem identification and fault-finding techniques
- Mathematical procedures for measuring and estimating, including calculating quantities and time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can implement and monitor ecological and biodiversity protection principles

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable federal, state or territory regulatory or local government ordinance requirements, codes of practice, and OHS and environmental policies relevant to ecological and biodiversity protection
- following organisational policies and procedures relevant to implementing and monitoring ecological and biodiversity protection principles
- effective communication and safe work practices
- implementing best practice and industry-acceptable ecological and biodiversity protection principles
- monitoring and maintaining ecological and biodiversity protection principles
- identifying and reporting non-compliant work practices
- completing relevant workplace documentation and reporting processes

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other

than confirmatory questions, will usually be conducted in an off-site context

- Assessment is to follow relevant regulatory requirements and Australian standards
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or

- language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

- are to be in line with applicable federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - safe work procedures
 - hazard and risk control
 - elimination of hazardous materials and substances
 - techniques for manual handling, including shifting, lifting and carrying

Regulatory requirements:

- are to be in line with applicable legislation from all levels of government that affect forest operations in relation to ecological and biodiversity protection and may include:
 - federal, state or territory legislation
 - Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act)
 - Threatened Species Conservation Act
 - Native Vegetation Act
 - native forest legislation
 - private native forest codes

- forest operational plans
- environmental legislation, policy and procedures
- environmental planning and assessment
- specific site environmental management plans
- relevant codes of practice
- water catchment management
- surface and ground water conservation requirements
- relevant Australian standards and industry standards
- hazard reduction policy and procedures
- plantation legislation
- plantation and reforestation code
- fisheries and fish passage
- national parks and wildlife legislation
- good neighbour policies
- award and organisational agreements
- heritage and traditional landowner
- forest certification, such as Forest Stewardship Council (FSC) or Australian Forestry Standard (AFS) certification

Organisational

requirements may include:

- legal compliance documentation
- recording and reporting
- environmental management requirements, including waste minimisation and disposal, recycling and re-use guidelines
- operational plan, including organisation and site guidelines

Various forest types may include:

- Callitris forest
- closed low eucalypt forest
- open low eucalypt forest
- low eucalypt woodland
- open eucalypt mallee forest
- eucalypt mallee woodland

- closed medium eucalypt forest
- open medium eucalypt forest
- medium eucalypt woodland
- closed tall eucalypt forest
- open tall eucalypt forest
- tall eucalypt woodland
- River Red Gum and river flood plains
- melaleuca forest
- tropical rainforest
- subtropical rainforest
- warm and cool temperate rainforest

Habitats:

- are any area or region where local animals, plants or organisms may live or rely upon for food, water, shelter or breeding purposes and may include:
 - habitat plants and trees, including:
 - specific species
 - burrow
 - food
 - roost
 - nest
 - recruitment trees
 - hollow logs
 - rocky outcrops
 - rock overhangs
 - caves
 - soil mounds
 - creek or river banks
 - sheltered valleys or canyons
 - any other site, feature or zone listed as habitat or potential habitat

Landscape features:

- are any topographical or ecological feature that could serve as a habitat to sensitive or endangered local animals, plants or organisms and may include:
 - wetlands
 - steep slopes
 - sheltered valleys or canyons

- rocky outcrops and overhang
- caves
- waterfalls and courses
- vegetation community
- sites of cultural or heritage significance

Protection zones:

- are areas or zones where operational conditions are varied by prescriptions for the management of ecological and biodiversity values, and may include:
 - buffer zones
 - filter strips
 - riparian protection areas
 - exclusion zones
 - conservation management plan

Operational plan may include:

- forest operations plan
- harvesting plan
- plantation establishment plan
- coupe plan
- roading plan
- drainage plan
- sediment and erosion control plan

Appropriate personnel may include:

- colleague
- leading hand
- bush boss
- foreman
- supervisor
- manager
- environmental officer
- other authorised personnel

Threatened species may include:

- animals and plants listed in the Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) and any amendments
- animals and plants listed in state or territory legislation, such as NSW

Threatened Species Conservation Act (1995)

- Changing conditions:**
- are those conditions that can alter or change and therefore require different work strategies or practices to maximise forest soil and water protection from an increased risk of pollution and may include:
 - land tenure
 - topography
 - machinery and operation type
 - forest type
 - soil type and erodibility
 - rainfall intensity
 - soil moisture
 - ground cover
 - code of practice
 - quality of roads and tracks
- Prescriptions** may include:
- any temporary or permanent measure or action aimed at protecting the ecology and biodiversity before, during or on completion of forest operations
 - modified silviculture
 - exclusion of an activity
 - modified access, including:
 - cordons or barricades
 - signage
 - written instruction
 - verbal instruction
 - code of practice directives or requirements
 - legislative compliance
 - local ordinances
- Documentation and reporting** may include:
- specific organisational records, reports and forms
 - update of forest operational plans
 - operational inspection report

- non-compliance report
- road and crossing designs
- drainage line and buffer zone specifications

Unit Sector(s)

Common Technical

Competency field

Competency field n/a

FPICOT3257 Follow cultural heritage requirements

Modification History

Version	Detail
1	New unit

Unit Descriptor

This unit describes the outcomes required to identify and protect Indigenous, historical and natural heritage sites in line with relevant legislation.

Application of the Unit

This unit involves identifying cultural heritage sites, applying protective measures, and monitoring work practices with the aim of improving cultural heritage awareness and care in a variety of work settings, including a forest or private native forest, horticultural, domestic, local council or emergency services environment.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge section and/or the Range Statement. Assessment of performance is to

be consistent with the Evidence Guide..

Elements and Performance Criteria

- | | |
|--|--|
| 1 Access and interpret cultural heritage legislation and organisational procedures | <p>1.1 Identify and review information on <i>occupational health and safety</i> (OHS), <i>legislative</i> and <i>organisational requirements</i> relevant to recognising and following cultural heritage protection, maintenance and recording</p> <p>1.2 Identify and interpret key principles and requirements that apply to cultural heritage protection and preservation</p> <p>1.3 Identify partnership arrangements and relationships with appropriate <i>government departments, agencies</i> and other relevant community organisations</p> <p>1.4 Identify <i>Indigenous, historical and natural heritage</i> sites and/or objects in the forest <i>operational plan</i> and maps</p> |
| 2 Apply cultural heritage legislative procedures | <p>2.1 Review work order and identify and clarify the potential impact on cultural heritage with <i>appropriate personnel</i></p> <p>2.2 Locate and identify Indigenous, historical and natural heritage sites and/or objects in the field</p> <p>2.3 Assess and report risks and hazards to cultural heritage sites</p> <p>2.4 Apply relevant requirements for the selection and use of <i>protection zones</i>, signage, field markings and equipment and verify them with appropriate personnel</p> <p>2.5 Carry out cultural heritage protection measures in line with legislative requirements</p> <p>2.6 Identify situations requiring specialist advice and the need to seek assistance, in line with organisational requirements</p> |
| 3 Monitor work practices to comply with legislation | <p>3.1 Monitor and adjust work practices to meet <i>changing conditions</i></p> <p>3.2 Monitor and maintain cultural heritage</p> |

- protection measures
- 3.3 Identify and report non-compliant work practices to appropriate personnel
- 3.4 Identify improved work practices and make recommendations in line with organisational continuous improvement procedures
- 4 Maintain records
 - 4.1 Revise and update forest operational plans in line with legislative and organisational requirements
 - 4.2 Complete relevant *documentation and reporting* processes in line with legislative and organisational requirements

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- Literacy skills to:
 - locate, read, interpret and convey information in written, diagrammatic and/or verbal form
 - complete and maintain documentation to support legislation and organisational requirements
- Communication skills and interpersonal techniques to interact appropriately with a range of stakeholders
- Problem-solving skills to:
 - identify problems that impact the site and make appropriate adjustments
 - review, identify and interpret work requirements

Required knowledge:

- Federal, state and territory legislation, regulations, standards, codes of practice and established safe practices relevant to the processes for implementing and monitoring cultural heritage protection procedures
- Organisational and site standards, requirements, policies and procedures associated with cultural heritage protection
- Importance of Indigenous, historical and natural heritage conservation
- Procedures for preventing harm to cultural heritage sites and objects
- Established communication channels and protocols
- Problem identification and common fault-finding techniques

- Types of tools, equipment and procedures for their safe use and maintenance

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment A person who demonstrates competency in this unit must be able to provide evidence that they can implement and monitor cultural heritage identification and protection principles in a workplace environment

Critical aspects for assessment and evidence required to demonstrate competency in this unit The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following federal, state or territory legislative and regulatory requirements and codes of practice relevant to implementing cultural heritage protection principles
- following organisational policies and procedures relevant to implementing and monitoring cultural heritage protection principles
- effective communication and safe work practices
- applying best practice and industry-acceptable cultural heritage protection procedures
- monitoring and maintaining cultural heritage protection procedures
- identifying and reporting non-compliant work practices
- completing relevant workplace documentation and reporting procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory requirements and Australian standards
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred

to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

- are to be in line with applicable federal, state or territory legislation and regulations, and organisational safety policies and procedures and may include:
 - safe work procedures
 - hazard and risk control
 - elimination of hazardous materials and substances
 - techniques for manual handling, including shifting, lifting and carrying

Legislative requirements:

- are to be in line with applicable legislation from all levels of government that affect forest operations in relation to cultural heritage protection and may include:

- specific site environmental management plans
- relevant codes of practice
- Safe Work Australia code of practice ‘Managing Risks in Forest Operations’
- relevant Australian and industry standards
- forest operational plans
- hazard reduction policy and procedures
- plantation legislation
- reforestation codes
- duty of care

Organisational

requirements may include:

- legal compliance documentation
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- OHS emergency and evacuation procedures
- ethical standards
- recording and reporting
- equipment use, maintenance and storage
- environmental management requirements, including waste minimisation and disposal, recycling and re-use guidelines
- supervision requirements
- training and licensing

Government departments and agencies:

- are those federal, state or territory and local departments, authorities, commissions or offices responsible for and administering cultural heritage legislation, codes, guidelines and policy and procedures, and may include:
 - Indigenous affairs and culture
 - heritage and history
 - environment

- sustainability
- forestry
- parks and wildlife
- water

Indigenous heritage:

- consists of any place or object of significance to Indigenous people because of their traditions, observances, lore, customs, beliefs and history, and may include:
 - sacred sites
 - ceremonial sites
 - burial sites
 - rock art and engravings
 - ochre pits
 - scatter sites
 - scarred or carved trees
 - stone arrangements or bora rings
 - stone tool manufacture and grinding sites
 - artefacts
 - massacre sites

Historical heritage:

- is the legacy of physical artefacts inherited from past generations, maintained in the present and bestowed for the benefit of future generations, and may include:
 - buildings
 - constructions
 - mining ruins
 - roadways
 - landscape features, including:
 - convict markings or carvings
 - blazed trees
 - historic locations and sites
 - monuments
 - historic artefacts and objects

- Natural heritage:**
- designates outstanding physical, biological and geological features, which may include:
 - physiological feature
 - paleontological feature
 - biological formation
 - habitat of protected, rare or endangered species
 - specific species management area
 - scientific site
 - educational significant site
 - spiritual site
 - nature reserve
 - wilderness area
- Operational plan:**
- may include:
 - harvesting plan
 - coupe plan
 - road plan
 - drainage plan
 - maps
 - aerial photographs
 - generally includes information and instructions relevant to:
 - general coupe/compartments requirements
 - forest inventory
 - trees to be felled and retained
 - site plan and environmental features
 - environmental requirements
 - exclusion zone data and details
 - sensitive habitat locations
- Appropriate personnel may include:**
- colleagues
 - supervisors
 - managers
 - regulatory agency personnel
- Protection zones:**
- are areas or zones where operational

conditions are varied by prescriptions for the management and protection of cultural heritage sites, and may include:

- sites of cultural or heritage significance
- Indigenous sacred sites
- protected areas or features
- sites containing danger or risk
- exclusion zones

Changing conditions:

- are those conditions that can alter or change and therefore require different work strategies or practices to maximise cultural heritage protection from an increased risk of harm and may include:
 - unexpected discovery of an Indigenous site
 - changing cultural sensitivity
 - unexpected discovery of a heritage or historic site
 - environmental features, changing ecology or ecosystem or habitat
 - protected, rare or endangered species encountered
 - operational conditions, such as:
 - adverse weather conditions
 - wind
 - light
 - ground conditions
 - fire

Documentation and reporting may include:

- notifiable Indigenous heritage information requirements
- archaeological or historic finds
- legislative compliance
- environmental compliance
- information on appropriate habitats or landscape features
- exclusion zones
- hazards or potential cultural heritage hazards and risks
- quality outcome requirements and records

- certification requirements
- maintenance schedules and records
- verbal, manual or computer-based system

Unit Sector(s)

Common Technical

Competency field

Competency field n/a

FPICOT3258 Comply with soil and water protection

Modification History

Version	Detail
1	New unit

Unit Descriptor

This unit describes the outcomes required to protect soil, water and water catchments from erosion, sediment and other pollutants.

Application of the Unit

This unit involves following erosion, sediment control and pollution prevention measures in a variety of work settings, including a forest environment; portable saw mill; portable woodchip mill; or horticultural, domestic, local council and emergency services environment.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT

Elements describe the essential outcomes of a unit of competency.

PERFORMANCE CRITERIA

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge section and/or the Range

Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

- | | |
|---|---|
| 1. Access and interpret soil and water protection legislation and organisational procedures | <p>1.1 Identify and review information on <i>occupational health and safety (OHS)</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to soil and water protection procedures for <i>various forest types</i></p> <p>1.2 Identify and interpret key principles and requirements that apply to <i>erosion mitigation, sediment</i> and other pollutant control, surface/ground water protection and catchment</p> <p>1.3 Identify relevant work practices and procedures that comply with regulatory requirements, codes of practice and <i>operational plans</i></p> |
| 2 Conduct erosion and other pollutant control measures | <p>2.1 Clarify and confirm operator responsibilities and duties with <i>appropriate personnel</i></p> <p>2.2 Identify <i>soil</i> erodibility, adverse weather, <i>environmental features</i> and <i>other factors</i> likely to influence soil and water protection measures</p> <p>2.3 Select and use materials, equipment and machinery in line with regulatory requirements, and verify them with appropriate personnel</p> <p>2.4 Apply erosion, sediment and <i>other pollution control measures</i> in line with forest operational plans and/or manufacturer recommendations</p> <p>2.5 Identify situations requiring specialist advice and seek assistance in line with organisational requirements</p> |
| 3. Monitor work practices to ensure compliance with legislation | <p>3.1 Monitor and adjust work practices to meet <i>changing conditions</i></p> <p>3.2 Monitor and maintain erosion, sediment and other pollutant control measures in line</p> |

with relevant legislation, codes of practice and organisational requirements

3.3 Identify and report non-compliant work practices to appropriate personnel

3.4 Identify improved work practices and make recommendations in line with organisational continuous improvement procedures

4. Maintain records

4.1 Revise and update forest operational plan and organisational procedures as required

4.2 Complete relevant *documentation and reporting* processes in line with codes of practice and organisational requirements

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- Literacy skills to:
 - locate, read, interpret and convey information in written, diagrammatic and/or verbal form
 - complete and maintain workplace documentation and reports
- Technical skills to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques to interact appropriately with colleagues and others in the workplace
- Numeracy skills to measure, calculate and estimate material quantities and time required to complete a task
- Problem-solving skills to:
 - identify problems and equipment faults and demonstrate appropriate response procedures
 - review, identify and interpret work requirements

Required knowledge:

- Applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for soil and water protection procedures
- Environmental protection requirements, including the safe disposal of products and waste material
- Organisational and site standards, requirements, policies and procedures relevant to environmental care
- Environmental policies and practices, risks and hazard identification relevant to soil and water protection
- Established communication channels and protocols
- Problem identification and common fault-finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance
- Mathematical procedures for measuring and estimating, including calculating quantities and time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can implement and monitor soil and water protection procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable federal, state or territory regulatory or local government ordinance requirements, codes of practice, OHS and environmental policies relevant to the protection of soil, water and water catchments
- following organisational policies and

procedures, relevant to the protection of soil, water and water catchments

- applying effective communication and safe work practices
- implementing effective erosion mitigation, sediment and pollutant control, surface and ground water protection measures
- monitoring and maintaining erosion mitigation and sediment control processes and water catchment protection measures
- identifying and reporting non-compliant work practices
- completing relevant workplace documentation and reporting processes

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory requirements and Australian standards
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance

- (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access, interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
 - Where the participant has a disability, reasonable adjustment may be applied during assessment
 - Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- OHS requirements:**
- are to be in line with applicable federal, state or territory legislation and regulations, and organisational safety policies and procedures and may include:
 - safe work procedures
 - hazard and risk control
 - elimination of hazardous materials and substances
 - techniques for manual handling, including shifting, lifting and carrying
- Legislative requirements:**
- are to be in line with applicable legislation from all levels of government that affect forest operations in relation to soil and water protection and may include:
 - federal, state or territory forestry and environmental legislation
 - regional forest agreements
 - relevant codes of practice
 - forest operational plans
- Organisational requirements** may include:
- organisational procedural manuals
 - communication protocols
 - quality assurance
- Various forest types** may include:
- coast and tableland native forests
 - inland native forests and woodlands
 - River Red Gum and river flood plain native forests
 - tropical forests
 - exotic plantations
 - native plantations
- Erosion mitigation** may include:
- walk-over techniques
 - minimal disturbance techniques
 - crown and cross fall drainage
 - cross bank drainage
 - relief culverts on roads
 - mitre and table drains on roads
 - armouring/gravelling of roads
 - crossing and draining surfaces
 - batter stabilisation
 - contour banks and channels
 - gabions

- sediment basins
 - riparian buffer zones
 - outlet protection structures
 - revegetation
- Sediment control measures** may include:
- slash management
 - sediment traps, basins and filters
 - geotextile fabric fences
 - vegetated filter strips
- Operational plans** may include:
- forest operational plan
 - plantation establishment plan
 - harvesting plan
 - operational inspection report
 - roading plan
 - sediment and erosion control plan
 - revegetation plan
 - chemical and fertiliser plan
- Appropriate personnel** may include:
- colleagues
 - leading hands
 - supervisors
 - managers
 - safety officers
- Soil** may include:
- dispersible soil
 - clay, silt, sand and gravel soil
 - loam soil
 - organic material
 - topsoil and subsoil
- Environmental features:**
- are those sensitive features that can be adversely effected if soil erosion occurs, or if inundated with sediment or other pollutants, and may include:
 - drainage lines and drainage depressions
 - water course, creeks and rivers
 - lakes, swamps and wetlands
 - aquatic species
 - steep slopes

- caves
- historic and cultural heritage sites
- road and water supply infrastructure

Other factors may include:

- track and road maintenance
- drainage structures
- setting of contour lines
- slope measurement techniques
- boundaries and survey markers
- site preparation techniques
- site cultivation techniques
- disposal of logging waste materials
- windrowing placement and techniques
- tree selection and felling techniques
- log dump locations and techniques
- log extraction and haulage techniques
- clearing techniques

Other pollution control measures may include:

- fuel containment barriers
- chemical spillage barriers
- containment and removal of waste, including rubbish litter and human waste

Changing conditions:

- are those conditions that can alter or change and therefore require different work strategies or practices to maximise forest soil and water protection from an increased risk of pollution and may include:
 - land tenure
 - topography
 - machinery and operation type
 - forest type
 - soil type and erodibility
 - rainfall intensity
 - soil moisture
 - ground cover
 - quality of roads and tracks

Documentation and reporting may include:

- specific organisational records, reports and forms
- update of forest operational plan

- operational inspection report
- non-compliance report
- road and crossing designs
- drainage line and buffer zone specifications

Unit Sector(s)

Common Technical

Competency field

Competency field n/a

FPICOT3259 Operate a four wheel drive on unsealed roads

Modification History

Version	Detail
1	Unit replaces FPICOT2234B Operate 4x4 vehicle

Unit Descriptor

This unit describes the outcomes required to safely operate a four wheel drive (4x4) vehicle on unsealed roads and tracks.

Application of the Unit

The unit involves operating a 4x4 vehicle in a variety of work settings

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Licensing, legislative, regulatory or certification requirements may be required in various jurisdictions.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Element	Performance Criteria
1 Identify four-wheel drive specific terms and terminology	<p>1.1 Access, interpret and apply <i>documentation</i> relevant to the work activity</p> <p>1.2 Identify the <i>structural</i> and handling differences between a conventional two-wheel drive vehicle and a four-wheel drive vehicle</p> <p>1.3 Use terminology specific to operating a <i>four-wheel drive vehicle</i></p> <p>1.4 Identify four-wheel drive techniques</p>
2 Conduct checks of 4x4 vehicle and equipment	<p>2.1 Perform <i>pre-start checks</i></p> <p>2.2 Secure loads in line with organisational and legislative requirements</p> <p>2.3 Select suitable navigation equipment where necessary</p> <p>2.4 Advise passengers of any special safety precautions to be taken when traversing rough terrain</p> <p>2.5 Check that tyre pressure is suitable for terrain and that it is changed as required in line with organisational procedures</p> <p>2.6 Select and access <i>maintenance equipment</i> prior to departure after considering the contextual issues</p>
3 Prepare for 4x4 operations	<p>3.1 Identify and follow <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to operating a 4x4 vehicle</p> <p>3.2 Determine type of operation and ensure <i>safe operating conditions</i></p> <p>3.3 Establish <i>communication</i> with others and choose the required safety <i>mechanisms</i> in line with organisational requirements</p>
4 Operate 4x4 vehicle on a range of terrain types	<p>4.1 Continually monitor the track to identify <i>hazards</i>, assess <i>risks</i>, and select the best route in line with OHS and environmental requirements</p> <p>4.2 Identify situations where the engagement of four-wheel drive is required and engage front <i>hubs</i> or centre differential lock where fitted</p> <p>4.3 Use appropriate range, gear, speed, driving and braking technique to negotiate a <i>range of terrain</i> types while maintaining control of vehicle at all times</p> <p>4.4 Check brakes and undercarriage after negotiating varying terrain</p> <p>4.5 Park and shut down 4x4 vehicle in line with</p>

- manufacturer specifications* and organisational requirements
- 5 Operate 4x4 vehicle on a steep slope
- 5.1 Inspect intended 4x4 vehicle path prior to negotiation of slope
 - 5.2 Use appropriate range, gear, speed, driving and braking technique to negotiate a steep slope, while maintaining control of vehicle
 - 5.3 Use control braking to ascend and descend, and avoid skidding
 - 5.4 Maintain traction in line with requirements of 4x4 vehicle
 - 5.5 Apply appropriate *automatic and manual techniques* when 4x4 vehicle cannot proceed any further on a steep slope due to traction problems
 - 5.6 Park and shut down 4x4 vehicle in line with manufacturer specifications and organisational requirements
- 6 Perform maintenance and minor repairs on 4x4 vehicles
- 6.1 Perform *routine maintenance* and repair tasks and report defects to the appropriate person
 - 6.2 Demonstrate safe use of a jack to support a four-wheel drive vehicle on uneven ground while changing a tyre
 - 6.3 Clean and store 4x4 vehicle and equipment after use in line with manufacturer specifications and organisational procedures
 - 6.4 Document maintenance and minor repairs in line with organisational procedures

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit

Required skills:

- Technical skills to:
 - apply four-wheel driving techniques in different terrain to safely operate a 4x4 vehicle
 - use and maintain relevant tools, machinery and equipment
 - safely negotiate steep slopes
 - clean and store 4x4 vehicle and equipment
 - attach required equipment to a 4x4 vehicle
 - operate a jack
- Communication skills to use appropriate communication and interpersonal techniques

- with colleagues and others
- Literacy skills to:
 - record and report workplace information in line with organisational requirements
 - maintain documentation
 - interpret written directions
 - use the vehicle manual for information
 - Numeracy skills to measure, estimate and calculate:
 - water depth, journey time and fuel consumption
 - time required to complete a journey
 - Problem-solving skills to:
 - identify problems and equipment faults
 - demonstrate appropriate response procedures
 - identify potential hazards and operational faults
 - conserve vehicle energy with appropriate throttle use

Required knowledge:

- Applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a 4x4 vehicle
- Environmental protection requirements, including the safe disposal of waste material, and the minimisation of carbon emissions
- Environmental risks and hazards associated with operating a 4x4 vehicle on unsealed roads
- 4x4 driving techniques and handling characteristics in different terrain
- Operational knowledge of a 4x4 vehicle, including controls, instruments, indicators and their use
- Tyre management principles
- Road rules, regulations, permit and licence requirements of the relevant state or territory
- Established communication channels and protocols
- Techniques for travelling in convoy
- Problem identification and resolution strategies, and common fault-finding techniques
- Types of tools and equipment relating to a 4x4 vehicle, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	A person who demonstrates competency in this unit must be able to provide evidence that they can operate a 4x4 vehicle on unsealed roads safely and in line with organisational requirements
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none">• following applicable federal, state or territory legislative and regulatory requirements and codes of practice relevant to operating a 4x4 vehicle• following organisational policies and procedures relevant to operating a 4x4 vehicle• communicating and working safely with others in rough terrain• performing pre-start checks of vehicle and equipment• safely operating a 4x4 vehicle in a range of unsealed road conditions, including negotiating steep slopes
Context of and specific resources for assessment	<ul style="list-style-type: none">• Competency is to be assessed in the workplace or a realistically simulated workplace• Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints• Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context• Assessment is to follow relevant regulatory requirements and Australian standards• The following resources should be made available:<ul style="list-style-type: none">• workplace location or simulated workplace• materials and equipment relevant to undertaking work applicable to this unit• specifications and work instructions• 4x4 vehicle
Method of assessment	<ul style="list-style-type: none">• Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package• Assessment methods must confirm consistency and accuracy of together with application of required knowledge• Assessment must be by direct observation of tasks, with

questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access, interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below.

Documentation must include:

- owner's manual
- manufacturer guidelines and specifications

Structural must include:

- recovery hooks and mounting features
- purpose and use of front wheel hubs if fitted
- factors affecting tyre size, fitment, rating and pressure

Four-wheel drive vehicles may include:

- manual and automatic four-wheel drive
- all-wheel drive

Pre-start checks must include:

- fuel, including diesel, gas and petrol
- water
- oil
- brake and transmission fluid levels
- battery water levels and electrolyte checks
- tyres
- belts
- leads
- hydraulic lines and connections
- air cleaners
- air conditioners
- brakes
- off-road safety equipment
- fitting of traction devices

Maintenance equipment may include:

- spares
- fluids

OHS requirements:

- are to be in line with federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - personal protective equipment (PPE) and clothing
 - safety equipment
 - current first aid equipment in vehicle
 - current vehicle firefighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - techniques for manual handling, including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

- are to be in line with applicable federal, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - award and organisational agreements
 - industrial relations
 - Australian standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal employment opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care

Organisational requirements may include:

- legal compliance documentation
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements, including waste minimisation and disposal, recycling and re-use guidelines

Safe operating conditions must include:

- interpreting weather conditions to determine suitability for driving
- determining food, water, PPE (sunglasses, high-visibility vest, etc.)

- and clothing requirements for journey
- selecting routes to minimise damage to the environment
- on and off-road conditions
- traffic pattern and density
- visibility
- loading of four-wheel drive, including techniques to reduce overloading

Communication may include:

- verbal and non-verbal language
- radio protocols

Mechanisms may include:

- personal location beacon (PLB)
- flares
- markers
- phone
- radio
- V-Sheet

Hazards and risks may include:

- rocks and other unexpected obstacles
- damage to vehicle
- tidal influences
- fire in vehicle
- faulty brakes
- leaking fuel
- faulty steering mechanism on vehicle
- animals and objects in vehicle path
- crocodiles and snakes in some areas
- windy or foggy sections of terrain
- steep slopes
- side slopes
- slippery surfaces
- land slides
- overhead tree limbs
- black ice
- towing trailers
- other vehicles
- fallen trees, limbs and logs
- icy terrain
- flooded terrain

- oil on road
- parked vehicles on road
- pedestrians on or near the road
- poor visibility

Hubs may include:

- manual
- electronic

Range of terrain types may include:

- smooth
- rough
- uneven
- slippery
- wet
- boggy
- sandy
- steep or hilly
- rock
- icy
- snow
- mud, including:
 - brown clay
 - black silt
 - salt pan mud
 - red
- hard ground
- water

Manufacturer specifications may include:

- engine characteristics
- system warning function
- four-wheel drive operation
- radius of turning circle
- safety procedures

Automatic and manual techniques may include:

- manual gear box stall stop
- appropriate automatic transmission safety

Routine maintenance may include:

- changing wheels in uneven terrain
- fluid top-up

Unit Sector(s)

Common Technical.

Competency field

Competency field Common Technical

FPICOT3260 Recover four wheel drive vehicles

Modification History

Version	Detail
1	New unit

Unit Descriptor

This unit covers the use of a variety of recovery equipment and advanced skills to recover four-wheel drive (4x4) vehicles in difficult terrain conditions.

Application of the Unit

This unit involves the recovery of 4x4 vehicles in a variety of work settings. The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan 4x4 recovery	<p>1.1 Identify and follow <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to 4x4 recovery</p> <p>1.2 Survey site to identify hazards, assess risks and select suitable strategy</p> <p>1.3 Select <i>personal protective equipment</i> (PPE) appropriate to type of recovery operation</p> <p>1.4 <i>Inform</i> appropriate personnel of your location</p> <p>1.5 Determine potential environmental impact of recovery</p>
2. Operate in a safe manner	<p>2.1 Consider <i>operating variables</i>, define danger zone and <i>apply strategies</i> to reduce risk and environmental impact during recovery</p> <p>2.2 Use rated <i>recovery equipment</i> correctly</p> <p>2.3 Use appropriate <i>communication</i> during recovery operations</p> <p>2.4 Repair environmental damage where possible</p>
3. Apply recovery method appropriate for the desired outcome	<p>3.1 Determine recovery method based on the <i>terrain conditions</i> and <i>pulling techniques</i> required of the situation</p> <p>3.2 Determine the <i>resources</i> required and their availability</p> <p>3.3 Communicate the recovery method selected and inform supervisor of your decision if appropriate</p> <p>3.4 Set up an exclusion zone</p> <p>3.5 Maintain communication with others to explain progress in recovery</p>
4. Demonstrate the safe use of jacks	<p>4.1 Identify hazards with the safe positioning of <i>jacks</i></p> <p>4.2 Use <i>safe operating procedures while using a jack</i> to lift a vehicle</p> <p>4.3 Demonstrate safe recovery of a vehicle using a jack</p>
5. Maintain vehicle recovery equipment	<p>5.1 Apply correct <i>maintenance</i> procedures for recovery equipment</p> <p>5.2 Document equipment maintenance according to</p>

ELEMENT	PERFORMANCE CRITERIA
	organisational procedures

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Required skills:

- Technical skills to:
 - use and maintain relevant tools, machinery and equipment
 - perform minor routine servicing of own vehicle
 - use a snatch strap, winch or jack and other recovery equipment to recover a 4x4 vehicle
 - conserve vehicle energy with appropriate throttle use
- Communication skills to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills to:
 - record and report workplace information
 - maintain documentation
- Numeracy skills to:
 - estimate, measure and calculate time required to perform 4x4 drive recovery
 - estimate and measure water depths, fuel consumption and other variables
- Problem-solving skills to:
 - identify problems and equipment faults
 - demonstrate appropriate response procedures

Required knowledge:

- Applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for recovering a 4x4 vehicle
- Environmental protection requirements, including the safe disposal of waste material and the minimisation of carbon emissions and environmental impact
- Environmental risks and hazards relevant to recovering 4x4 vehicles in difficult terrain conditions
- Techniques to use jacks and other recovery equipment
- Factors affecting choice of recovery equipment and mode of recovery
- Issues to consider when defining danger zones

- Effect of suction on vehicles to identify mass weight needed for cable and winch capacity
- Hazards and safety issues associated with the use of jacks and recovery equipment
- Environmental impacts of 4x4 operation
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can recover 4x4 vehicles in difficult terrain conditions

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- using different vehicle jacks in different terrains and environmental conditions
- using a winch and a snatch block (2:1) in difficult terrain, using ground anchor points for both hard ground and soft sand
- using other types of recovery equipment in a safe and efficient manner

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow regulatory requirements and Australian standards
- The following resources should be made available:

- workplace location or simulated workplace
- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions
- 4x4 vehicle
- Assessment of this competency requires access to:
 - appropriate 4x4 vehicle
 - a suitable outdoor environment with difficult terrain where four-wheel drive skills may be demonstrated
 - maintenance and repair resources
 - vehicle recovery equipment
 - food and water resources

Method of assessment

- Due to issues such as the variation in terrain and possible recovery scenarios, this unit must be assessed over a minimum of two different occasions and two different techniques, in order to ensure consistency of performance over the range statement variables and applicable contexts
- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with

- assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- OHS requirements:**
- are to be in line with federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - PPE and clothing
 - safety equipment
 - current first aid equipment in vehicle
 - current vehicle firefighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - techniques for manual handling, including shifting, lifting and carrying

- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices

- Legislative requirements:**
- are to be in line with federal, state or territory legislation,

regulations, certification requirements and codes of practice and may include:

- award and organisational agreements
- industrial relations
- Australian standards
- confidentiality and privacy
- OHS
- the environment
- equal employment opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal compliance documentation
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements, including waste minimisation and disposal, recycling and re-use guidelines

Personal protective equipment may include:

- boots
- gloves
- eye protection
- long pants

Informed may include:

- verbal or written
- emergency positioning
- personal location beacon (PLB)
- flares
- markers
- phone
- radio

- Operating variables** may include:
- type of recovery equipment used and associated risks, e.g. possibility of cable or rope failure
 - direction of recovery
 - suitable protection
 - potential for vehicle roll or fall
 - effect of suction on cable/winch capacity
- Applied strategies** may include:
- defining a danger zone
 - safely using equipment
 - using rated equipment where practicable
 - safe operating procedures
 - risk assessment practices
 - ensuring only appropriate personnel are in danger zone
- Recovery equipment** may include:
- cables
 - jacks
 - tow ropes
 - tree protectors
 - shackles
 - chains
 - recovery straps
 - snatch straps
 - winch and snatch block
- Communication** may include:
- verbal and non-verbal language
 - radio protocols
- Terrain conditions** may include:
- smooth
 - rough
 - uneven
 - slippery
 - wet
 - boggy
 - sandy
 - steep or hilly
 - rock
 - icy
 - snow

- mud, including:
 - brown clay
 - black silt
 - salt pan mud
 - red
- hard ground
- water

Pulling technique may include:

- complex and multi-line
- straight pull
- double pull
- starting vehicle
- taking towed object to a location
- using a snap strap
- using a winch

Resources may include:

- winch:
 - electric
 - hydraulic
 - manual
 - pull along
- jacks
- recovery points
- rated recovery hooks
- assorted cables, including steel cables
- plasma ropes
- snatch straps
- snatch blocks
- chains or shackles
- tree trunk protectors
- cable dampeners
- tyre deadman or buried anchor
- log deadman
- Spanish windless
- A-frame

Jacks may include:

- jack points
- bottle jack
- exhaust jack

- high-lift jack (Wallaby jack)

Safe operating procedures while using a jack may include:

- regard for personal safety
- regard for vehicle stability
- awareness of soft footing

Maintenance may include:

- cleaning
- cable rolling
- greasing and oiling

Unit Sector(s)

Common Technical

Competency field

Competency field n/a

FPICOT3261 Transport forestry logs using trucks

Modification History

Replaces FPICOT3226B, Not Equivalent

Unit Descriptor

Unit descriptor This unit describes the outcomes required to drive log trucks to or from a forestry harvesting site, facilitate log loading and unloading, and deliver logs to their intended destination according to organisational procedures and regulations.

General workplace legislative and regulatory requirements apply to this unit. Specific licences and certification may be required, subject to enterprise requirements.

Application of the Unit

Application of the unit The unit involves transporting forestry logs using trucks in a variety of work settings, including forest environments, landings, log dumps, saw mills, wood chip mills, veneer mills, board/plywood mills and other settings, such as farms and agriculture.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

1. Prepare to transport logs

- 1.1. Appropriate ***work/occupational health and safety (WHS/OHS), environmental and organisational policies and procedures*** relevant to transporting forestry logs using trucks are identified and followed
- 1.2 Logging sites and logs to be transported are identified from schedules, ***work orders*** or harvesting site personnel
- 1.3. Coupe map is located and examined for truck access areas
- 1.4. Work order and/or schedules are reviewed and clarified with ***appropriate personnel***, as required
- 1.5. ***Truck, ancillary equipment, accessories and/or configuration*** requirements relevant to work order and ***load build*** are located and availability is confirmed
- 1.6. ***Transportation documentation*** required to comply with legislation related to driving hours, load limits and dimensions is received and checked

2. Establish route for log truck

- 2.1. Route is selected and its suitability to enter and exit coupe is confirmed with appropriate personnel to ensure minimal environmental impact and site protection
- 2.2. Transport routes are ***communicated*** and confirmed with appropriate personnel to ensure the most efficient, safe, secure and legal movement of forestry logs
- 2.3. Information on height, width and load limits of ***road infrastructure, environmental constraints and other restrictions*** are adhered to, where necessary
- 2.4. Time required to transport logs is estimated and confirmed with relevant personnel accounting for fatigue management legislation and guidelines

3. Facilitate log truck loading

- 3.1. Access is identified and manoeuvring approach established with worksite personnel for loading areas
- 3.2. Truck and/or configuration are positioned to avoid site and equipment hazards and to maximise load safety and security

ELEMENT**PERFORMANCE CRITERIA**

- while loading
- 3.3. **Log positioning equipment** is placed and checked for planned loading, and is reset if necessary
- 3.4. Safe loading procedures are agreed to with relevant worksite personnel and monitored to ensure load meets transport regulatory requirements
- 3.5. Communication between driver and machine operators is established and maintained to determine safe location when loading logs
- 3.6. Load is checked and feedback provided to loader operator, as required, to ensure safe transport
4. Secure logs prior to transport
- 4.1. Load is secured with sufficient number and type of **securing devices** as per loading guidelines and transport regulatory requirements
- 4.2. Logs are re-tensioned as required
- 4.3. **Overhang warning devices** and signage are fitted to load to comply with transport regulatory requirements
5. Transport logs
- 5.1. Logs are transported following planned or modified route with consideration for road surfaces, conditions and fatigue management legislation and guidelines
- 5.2. Condition of roads and tracks is monitored, and unexpected ground, water, vegetation or other **environmental conditions** are reported to appropriate personnel
- 5.3. Truck is operated and driven to manufacturer specifications and legislative requirements using **primary and subsidiary controls** as appropriate to conditions
- 5.4. Truck **gauges and warning devices** are monitored through observation of performance to detect operating faults
- 5.5. Operating faults are identified, **recorded and reported**, and responded to as necessary according to organisational requirements to ensure equipment is safely operated within manufacturer specifications and safety regulations
- 5.6. Periodic load safety checks are conducted and load is **re-tensioned** according to statutory requirements and road conditions
- 5.7. **Communication methods** with other drivers and road users are established and operated during log transport to inform location of truck and possible hazards
- 5.8. Communication channels are kept open in line with organisational arrangements to ensure location is known at all times so that timely emergency assistance can be provided if required

ELEMENT	PERFORMANCE CRITERIA
6. Complete log transport operations for unloading	<ol style="list-style-type: none">6.1. Site procedures for unloading are established with appropriate personnel and site inductions are completed6.2. Truck is directed to and manoeuvred into planned position for unloading6.3. Truck is parked in designated area as instructed by appropriate personnel to avoid site and equipment hazards6.4. Truck and trailer are shut down and truck is secured according to manufacturer specifications and site requirements6.5. Load is inspected for log movement and provision is made to support logs that cannot be controlled when released6.6. Safe location and safe unloading zones are identified and adhered to when removing logs according to site unloading procedures6.7. Securing devices for load restraint are released in correct sequence for truck, trailer and/or load configuration6.8. Log shifting process and truck operations, including faults, are recorded and reported to appropriate personnel6.9. Workplace records and documentation are completed and maintained according to workplace procedures6.10. Truck and trailer are made safe for return journey to coupe

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills to:
 - use and maintain relevant tools, machinery and equipment
 - efficiently and safely transport forestry logs using trucks
- Communication skills to:
 - use appropriate communication and interpersonal techniques with colleagues and others
 - use skills, including questioning, active listening, asking for clarification, and seeking advice when required
- Literacy skills to:
 - record and report workplace information, including log books, incident reports, and transport routes
 - maintain documentation
- Numeracy skills to:
 - calculate load sizes

- record and estimate weights
- calculate work and rest times
- calculate load restraint requirements
- Problem-solving skills to:
- identify problems and equipment faults
- demonstrate appropriate response procedures
- determine appropriate haulage routes
- Map reading skills to interpret coupe and road transport maps

Required knowledge

- WHS/OHS, environmental, and organisational policies, procedures and established safe practices relevant to the full range of processes for the transport of forestry logs using trucks
- Environmental protection requirements, including noise levels, emissions, damage to habitat, safe disposal of waste material, and minimisation of carbon emissions
- Environmental risks and hazards associated with the transport of forestry logs using trucks
- Energy efficient practices, including minimising fuel consumption
- Scheduling and routing procedures
- Transport regulatory requirements relating to the transport of forestry logs
- Truck capabilities and capacities
- Statutory road regulations
- Load restraint standards and techniques
- Safe log loading and unloading methods and techniques, including load restraint
- Established communication channels and protocols
- Fatigue management legislation and guidelines
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment used for the transport of forestry logs, and procedures for their safe use, operation and maintenance
- Safe manual handling techniques and/or equipment
- Applicable fall from heights regulations and compliance requirements
- Appropriate mathematical procedures for calculating load sizes, estimating and recording weights, load restraint requirements, and work and rest times
- Procedures for recording and reporting workplace information

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely transport forestry logs using trucks according to organisational requirements.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following appropriate WHS/OHS, environmental and organisational policies and procedures relevant to transporting forestry logs using trucks
- planning forestry log movement in line with organisational requirements
- observing and facilitating loading and unloading log truck to organisational requirements
- securing forestry logs prior to transport according to legislative and organisational requirements
- following legal requirements as well as organisational policies and procedures relevant to transporting forestry logs
- completing documentation required by workplace personnel to complete the movement of forestry logs.

Context of and specific resources for assessment

- Competency is to be assessed in the workplace
- Assessment is to occur under standard and authorised work practices, safety and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
- workplace location
- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and at least one other type of evidence i.e. third party report and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency relevant to the industry sector, workplace and job role
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

RANGE STATEMENT

Work/occupational health and safety (WHS/OHS) requirements:

are to be in accordance with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first-aid equipment
- fire-fighting equipment
- fatigue management
- hazard and risk control

RANGE STATEMENT

- elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - manual handling, including shifting, lifting and carrying
 - chain of responsibility
 - legislation
 - organisational policies and procedures
 - energy efficiency
 - workplace practices
- Environmental requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - WHS/OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and reuse guidelines)
- Organisational requirements** may include:
- instructions for equipment allocation and usage, location and intended activity to designated personnel
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
 - schedulers
- Work orders** may include:
- rigid or articulated log trucks
- Truck** may include:
- the following:
- semi-trailers
 - jinkers
 - quad-dogs
 - B doubles

RANGE STATEMENT

- Ancillary equipment** may include:
- two-bay skeletal trucks
 - safety fittings
 - load restraint devices
 - head boards
 - cab guards
- Accessories** may include:
- tools
 - records
 - first aid kits
 - fire extinguishers
 - binders
 - chains
 - personal protective equipment
- Configuration** is to include:
- a truck and trailer combination
- Load build:** is to include positioning of logs on truck so as to avoid:
- uneven weight distribution
 - instability or uncontrolled collapse of the load during loading or unloading
- must also take into account:
- requirements for trailer rigidity
 - turning clearance
 - overhang
 - projection above stanchions
 - crowning
 - weight distribution on truck and trailer axles
 - contact with bolsters, stanchions and other logs
- Transportation documentation may include:**
- transport permits
 - gazette notices
 - information booklets
 - maps
- Communication** may include:
- verbal and non-verbal language
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Road infrastructure** may include:
- sealed or unsealed roads

RANGE STATEMENT

- Environmental constraints** may include:
- established tracks
 - soil type
 - access
 - slope
 - weather conditions
- Other restrictions** may include:
- load height
 - weight
 - overhang
- Log positioning equipment** may include:
- bolsters
 - slippers
 - stanchions
 - chocks
- Securing devices** may include:
- dogs and chains
 - binders/straps
 - webbing
 - lashings and winches
 - auto-tensioning devices
- Overhang warning devices** may include:
- flags
 - lights
 - reflectors
 - signs
- Environmental conditions** may include:
- soil and water protection
 - ground hazards and obstacles
 - wind and dust
 - fog and rain
- Primary controls** may include:
- power
 - brakes
 - steering
 - speed
 - position
 - load reaction
 - gear selection
- Subsidiary controls** may include:
- differential lock
 - centre tyre inflation (CTI) power dividers
- Gauges and warning devices** may include:
- alarms
 - lights
 - buzzers
- Records and reports:** may include:
- scheduling and coordination outcomes

RANGE STATEMENT

- log movement
- despatch outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

may be:

- manual
- work diary
- computer-based system
- other appropriate organisational communication system

Re-tensioning is to include:

- re-tightening of the chains, binders and other load restraint devices

Communication methods may include:

- two-way radio
- hands-free mobile phones

Unit Sector(s)

Not applicable.

Custom Content Section

Not applicable.

FPICOT3262 Transport forestry produce using trucks

Modification History

New unit, no equivalent unit.

Unit Descriptor

Unit descriptor This unit describes the outcomes required to drive trucks carrying forestry produce from a forestry harvesting site and deliver it to its intended destination according to organisational procedures and regulations.

General workplace legislative and regulatory requirements apply to this unit. Specific licences and certification may be required subject to enterprise requirements.

Application of the Unit

Application of the unit The unit involves transporting forestry produce using trucks from a forestry harvesting site to a variety of work settings, including log dumps, saw mills, wood chip mills, veneer mills, board/plywood mills and other settings, such as farms and agriculture.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

1. Prepare to transport forestry produce

- 1.1. Appropriate *work/occupational health and safety (WHS/OHS), environmental* and *organisational policies and procedures* relevant to transporting *forestry produce* using trucks are identified and followed
- 1.2. *Work order*, schedules and other relevant *transportation documentation* are obtained, reviewed and clarified with *appropriate personnel, as required*
- 1.3. Coupe map is located and examined for truck access areas
- 1.4. Routes to enter and exit coupe are planned to ensure minimal environmental impact and site protection
- 1.5. *Truck, ancillary equipment, accessories* and *configuration* are checked for serviceability according to manufacturer specifications and statutory regulations

2. Load and unload forestry produce

- 2.1. Access is identified and manoeuvring approach established with site personnel for loading and unloading sites
- 2.2. Safe loading and unloading procedures are agreed to with relevant worksite personnel
- 2.3. *Communication* between driver and machine operators is established and maintained to determine safe location during loading and unloading of forestry produce
- 2.4. Load is checked to ensure it meets load requirements and complies with transport regulatory requirements
- 2.5. Load is secured with appropriate *securing devices* as per loading guidelines and transport regulatory requirements
- 2.6. Suitable transport routes are planned to ensure the most efficient, safe, secure and legal movement of forestry produce

3. Transport forestry produce

- 3.1. Truck and/or configuration is operated and driven to manufacturer specifications and legislative requirements using *primary and subsidiary controls* as appropriate to road and weather conditions

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|--|---|
| 4. Unload forestry produce and complete log transport operations | <p>3.2. Truck <i>gauges and warning devices</i> are monitored through observation of performance to detect operating faults</p> <p>3.3. Forestry produce is transported following planned or modified route with consideration for road surfaces and conditions and fatigue management legislation and guidelines</p> <p>3.4. <i>Communication methods</i> with other drivers and road users are established and operated during transport of forestry produce to inform location of truck and possible hazards</p> <p>3.5. Communication channels are kept open in line with organisational arrangements to ensure location is known at all times so that timely emergency assistance can be provided if required</p> <p>3.6. Regular load safety checks are conducted according to statutory requirements and road conditions, as required</p> <p>3.7. Operating faults are identified, <i>recorded and reported</i>, and responded to as necessary according to organisational requirements</p> <p>4.1. Site procedures for unloading are established with appropriate personnel and site inductions are completed</p> <p>4.2. Truck is parked in designated area or unloading point as instructed by appropriate personnel to maintain site, equipment and operator safety</p> <p>4.3. Engine is shut down and truck secured according to manufacturer specifications and site requirements</p> <p>4.4. Site unloading procedures are followed to ensure safe unloading of forestry produce</p> <p>4.5. Forestry produce shifting process and truck operations, including faults, are <i>recorded and reported</i> to appropriate personnel</p> |
|--|---|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills to:
 - use and maintain relevant tools, machinery and equipment
 - efficiently and safely transport forestry produce using trucks
- Communication skills to:

- use appropriate communication and interpersonal techniques with colleagues and others
- use oral communication skills, including questioning, active listening, asking for clarification and seeking advice when required
- Literacy skills to:
 - record and report workplace information
 - maintain documentation
- Numeracy skills to:
 - record and estimate weights
 - calculate work and rest times
 - record hours in work diary
- Problem solving skills to:
 - identify problems and equipment faults
 - demonstrate appropriate response procedures
 - determine appropriate transport routes
- Map reading skills to interpret coupe and road transport maps

Required knowledge

- WHS/OHS, environmental, and organisational policies, procedures and established safe practices relevant to the full range of processes for the transport of forestry produce using trucks
- Environmental protection requirements, including noise, emissions, damage to habitat, safe disposal of waste material and the minimisation of carbon emissions
- Environmental risks and hazards associated with the transport of forestry produce using trucks
- Energy efficient practices, including minimising fuel consumption
- Scheduling and routing procedures
- Transport regulatory requirements relating to the transport of forestry produce
- Truck capabilities and capacities
- Statutory road regulations
- Techniques for load construction, including types of load restraints for forestry produce
- Established communication channels and protocols
- Fatigue management legislation and guidelines
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment used for the transport of forestry produce and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for measuring load sizes, estimating and recording weights, and calculating time to complete tasks
- Applicable fall from heights regulations and compliance requirements
- Procedures for recording and reporting workplace information

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely transport forestry produce using trucks according to organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following appropriate WHS/OHS, environmental and organisational policies and procedures relevant to transporting forestry produce using trucks
- following organisational policies and procedures relevant to loading and unloading forestry produce using trucks
- transporting and securing forestry produce according to legislative and organisational requirements.
- Competency is to be assessed in the workplace
Assessment is to occur under standard and authorised work practices, safety and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Context of and specific resources for assessment

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and at least one other type of evidence i.e. third party report, and it must also reinforce the integration of employability

skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency relevant to the industry sector, workplace and job role
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

RANGE STATEMENT

Work/occupational health and safety (WHS/OHS) requirements:

- are to be in line with Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - personal protective equipment and clothing
 - safety equipment
 - first-aid equipment
 - fire-fighting equipment

RANGE STATEMENT

- fatigue management
 - hazard and risk control
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - manual handling, including shifting, lifting and carrying
 - chain of responsibility
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - energy efficiency
 - workplace practices
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - WHS/OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and reuse guidelines)
- Forestry produce may include:**
- bark
 - wood shavings
 - wood chips
 - biofuel materials
- Work order** may include:
- instructions for equipment allocation and usage, location and intended activity to designated personnel
- Transportation documentation** may include:
- transport permits
 - gazette notices
 - information booklets
 - maps
- Appropriate personnel** may include:
- supervisors

RANGE STATEMENT

- suppliers
 - clients
 - colleagues
 - managers
 - schedulers
- Truck** may include:
- rigid or articulated trucks
 - the following:
 - semi-trailers
 - jinkers
 - quad-dogs
 - B doubles
 - two-bay skeletal trucks
 - pocket road trains
- Ancillary equipment** may include:
- safety fittings
 - head boards
 - cab guards
- Accessories** may include:
- tools
 - records
 - first aid kits
 - fire extinguishers
 - binders
 - chains
 - personal protective equipment
- Configuration** is to include:
- a truck and trailer combination
- Communication** may include:
- verbal and non-verbal language
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Securing devices** may include:
- tarpaulins and load covers
 - dogs and chains
 - binders/straps
 - webbing
 - lashings and winches
 - auto-tensioning devices

RANGE STATEMENT

Primary controls may include:

- power
- brakes
- steering
- speed
- position
- load reaction
- gear selection

Subsidiary controls may include:

- differential lock
- centre tyre inflation (CTI) power dividers

Gauges and warning devices may include:

- alarms
- lights
- buzzers

Communication methods may include:

- two-way radio
- hands-free mobile phones

Records and reports:

- may include:
 - scheduling and coordination outcomes
 - log movement
 - despatch outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents or equipment malfunctions
- may be:
 - manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Not applicable.

Custom Content Section

Not applicable.

FPICOT3263 Maintain and contribute to energy efficiency

Modification History

Version 1.0 No equivalent unit.

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to maintain energy efficient work practices and contribute to systems improvement with regard to energy efficiency in the forest and timber products industry.

It also includes developing an understanding of the positive benefits of the forest and wood products industry in reducing greenhouse emissions, and promoting them to stakeholders.

These work functions would be carried out under routine supervision and within organisational guidelines.

Application of the Unit

Application of the unit

The unit involves maintaining and contributing to energy efficient work practices in the forest and forest products industry across a range of operations and work settings.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication.

Pre-Requisites

Nil.

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

NEW ELEMENT

NEW PERFORMANCE CRITERIA

- | | |
|---|---|
| <p>1. Identify requirements to maintain and contribute to energy efficiency</p> | <p>1.1 Appropriate <i>work/occupational health and safety (WHS/OHS), environmental, and organisational policies and procedures</i> relevant to maintaining and contributing to energy efficiency are identified and followed</p> <p>1.2 Requirements to maintain energy efficiency are identified and reviewed</p> <p>1.3 Benefits relating to the forest and wood products industry and energy efficiency are identified</p> <p>1.4 Benefits of using forest and timber products, in comparison to other building materials, are identified through a life cycle analysis</p> |
| <p>2. Follow and promote energy efficient work practices</p> | <p>2.1 Site energy efficiency policy and procedures, including those relating to recycling and waste management, are adhered to</p> <p>2.2 <i>Equipment</i> is operated to ensure maximum <i>energy efficiency</i></p> <p>2.3 Own <i>work practices</i> are monitored to maintain energy efficiency</p> <p>2.4 <i>Positive aspects</i> of the forest and timber products industry, and the benefits of forest and timber products in comparison to other building materials, are promoted with internal and external stakeholders</p> |
| <p>3. Contribute to systems improvement with</p> | <p>3.1 Reviews of operations for improvement in energy efficiency are contributed to and supported</p> |

NEW ELEMENT

regard to energy efficiency

NEW PERFORMANCE CRITERIA

3.2 Opportunities for efficiencies in consumption of raw materials are identified and progressed through *appropriate personnel*

3.3 Opportunities for innovation in energy efficiency are identified and progressed through established channels

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills to use relevant equipment
- Communication and interpersonal skills to interact appropriately with colleagues and others in the workplace
- Numeracy skills to estimate, measure and calculate various factors relating to energy usage and efficiency improvements

Required knowledge

- Organisational and site standards, requirements, policies and procedures relevant to maintaining and contributing to energy efficiency
- Environmental protection requirements, including the safe disposal of waste material and site recycling, recovery and waste management procedures
- Workplace communication channels, protocols and procedures
- Role of forests, forestry and forest products in carbon capture and storage
- Role of the forest and timber products industry in minimising greenhouse emissions
- Life cycle analysis of forests and forest products in comparison to other building materials

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can maintain and contribute to energy efficient work practices

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following organisational policies and procedures relevant to maintaining and contributing to energy efficiency
- the safe use of relevant equipment to complete work tasks while optimising energy efficiency
- participating in processes to improve energy efficiency.
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - organisational policies and procedures that contribute to energy efficient work practices

Context of and specific resources for assessment

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

WHS/OHS policies and procedures:

- are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - personal protective equipment and clothing
 - safety equipment
 - first-aid equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - machine guarding

Environmental policies and procedures must include:

- workplace practices
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational policies and procedures:

- are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - Australian standards
 - processes and standards
 - WHS/OHS, emergency and evacuation procedures
 - relevant industry codes of practice
 - duty of care
 - heritage and traditional land owner issues
 - organisational and site guidelines regarding energy efficiency
 - policies and procedures relating to own role and responsibility
 - quality and continuous improvement
 - recording and reporting requirements

RANGE STATEMENT

- Equipment:**
- equipment use, maintenance and storage requirements
 - is to include:
 - equipment necessary to complete work tasks
 - and may include:
 - telephones or communications equipment
 - tools
 - machinery
 - vehicles
 - instruments
 - computers and printers
 - facsimile machines and photocopiers
 - lighting and air conditioning
- Energy efficiency may include:**
- maximising resource use
 - minimising waste
 - maximising recycling
 - reducing landfill
- Work practices may include:**
- equipment use
 - energy use
 - reduced carbon emissions
 - use of non-renewable resources
 - re-using and recycling
 - reduced waste generation and material consumption
 - the use of hazardous and toxic materials
 - chemical use
- Positive aspects may include:**
- carbon sequestration in trees
 - storage of carbon in trees, wood, timber and paper products
 - neutral or positive carbon footprints
- Appropriate personnel may include:**
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers

Unit Sector(s)

Not applicable.

Custom Content Section

Not applicable.

FPICOT3264 Build and maintain timber stacks

Modification History

Version	Code and title of equivalent unit of competency
1.0	No equivalent unit

Unit Descriptor

This unit describes the outcomes required to safely build and maintain timber stacks in a variety of workplace settings, according to regulations and site procedures.

Application of the Unit

The unit involves stacking timber within the scope of the person's job role and authority and in a variety of work settings, such as saw mills, veneer mills, board/plywood mills, frame and truss plants, timber product manufacturers, timber treatment plants, and other settings such as timber warehouses and timber drying/kiln operations.

Licensing/Regulatory Information

Commonwealth, state or territory legislative and regulatory requirements, including mobile plant licensing, apply to this unit.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

1. Prepare to stack timber

- 1.1 Appropriate ***work/occupational health and safety (WHS/OHS), environmental and organisational policies and procedures*** relevant to building and maintaining timber stacks are identified and followed
- 1.2 Work order is reviewed to identify potential timber stack site
- 1.3 ***Risk assessment*** is undertaken and measures adopted in line with site requirements to address hazards and faults and to ensure safety of self, others and proposed timber stack, taking ***avoidable loss*** into account
- 1.4 ***Traffic management plan*** is followed
- 1.5 Required ***safety equipment*** is obtained and used in line with site requirements
- 1.6 ***Communication*** with others is established and maintained according to WHS/OHS and site requirements for stacking timber
- 1.7 ***Limitations*** associated with building a timber stack are identified and assistance is sought as required, in line with site procedures

2. Build timber stack

- 2.1 Timber is checked to ensure it meets labelled or expected content and non-compliant material is reported to supervisor, in line with site and safety requirements
- 2.2 Appropriate ***bearers*** are chosen to create required space for powered mobile plant to lift the stack
- 2.3 Stack is created, bearers are checked, and timber is restrained in line with site requirements
- 2.4 Maximum height of stack is managed to suit environment and weather conditions, in line with industry safety standards and site requirements
- 2.5 Problems and faults are identified and reported to supervisor in line with site procedures

3. Maintain timber stack

- 3.1 ***Routine checks*** are performed as stack is built and for life of stack, and defects are reported to appropriate personnel in line with site requirements
- 3.2 ***Repairs*** are conducted as required to timber stack, in line with site

ELEMENT	PERFORMANCE CRITERIA
	procedures and scope of own job role
	3.3 Waste material is stored, reused, recycled or disposed of in line with site procedures and environmental requirements
	3.4 <i>Workplace records and documentation</i> are completed and maintained in accordance with site requirements

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills to:
 - use timber stacking tools, machinery and equipment
 - identify and manage the impacts of fatigue according to enterprise policy and procedures
- Communication skills to:
 - interact appropriately with colleagues and others
 - report to supervisor and other appropriate personnel in line with site procedures
- Literacy skills to:
 - record and report workplace information in line with site requirements
 - interpret written directions, such as work orders, site requirements and organisational policies and procedures
 - refer to powered mobile machinery manual
- Numeracy skills to:
 - measure length of bearers
 - assess width, length, height and weight of packs and stack
 - visually estimate stack ratios
- Problem solving skills to identify problems, faults and potential hazards

Required knowledge

- Organisational and site standards, requirements, policies and procedures for building and maintaining timber stacks
- Environmental protection requirements, including criteria for recycling and reusing material with faults and safely disposing of waste material
- Risks and hazards (including environmental) of building and maintaining timber stacks

- Criteria for site surface stability and building a stack
- Factors contributing to avoidable loss
- Key components of a traffic management plan
- Procedures for conducting a risk assessment
- Methods to visually estimate length of bearers and ratio, grading, colour identification and tagging of stacked timber
- Length, dimensions, tolerances, profiles and names of industry standard cross-sections
- Established communication channels and protocols
- Problem identification and common fault-finding techniques
- Strategies for resolving timber stack faults
- Types of timber stacking tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information
- 'Fit for work' requirements, the impact of fatigue, and enterprise policy and procedures for fatigue management
- Standards for height of a timber stack inside, under cover and in the open

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	<p>A person who demonstrates competency in this unit must be able to provide evidence that they can stack timber and maintain timber stacks in line with site standards, guidelines and organisational requirements.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none">• following organisational policies and procedures relevant to building and maintaining a timber stack• use of safety equipment relevant to building and maintaining a timber stack, in line with site requirements• communicating and working safely with others in the workplace• performing risk and site assessments to build a timber stack• safely building at least one timber stack appropriate to the needs of the workplace• reporting and documenting required timber stack and fault information in line with site requirements• safely repairing a timber stack with a range of varying faults.
Context of and specific resources for assessment	<ul style="list-style-type: none">• Competency is to be assessed in the workplace or realistically simulated workplace• Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints• Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context• Assessment is to follow relevant regulatory or Australian standards requirements• The following resources should be made available:<ul style="list-style-type: none">• workplace location or simulated workplace• materials and equipment relevant to undertaking work applicable to this unit• specifications and work instructions for powered mobile machinery
Method of assessment	<ul style="list-style-type: none">• Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package• Assessment methods must confirm consistency and accuracy, together with the application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- WHS/OHS requirements:**
- are to be in line with commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - safety equipment, including personal protective equipment and clothing
 - first-aid equipment
 - fire-fighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances

- manual handling procedures, including shifting, lifting and carrying
 - material safety data sheets (MSDS)
- Environmental requirements must include:**
- organisational policies and procedures
 - workplace practices
 - sustainability and environmental management requirements, including waste minimisation and disposal, recycling and reuse guidelines
 - energy efficiency measures
- Organisational policies and procedures:**
- are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - award and enterprise agreements
 - industrial relations
 - Australian standards
 - WHS/OHS emergency and evacuation procedures
 - the environment
 - physical impairment (due to drugs, alcohol, fatigue, etc.)
 - relevant industry codes of practice
 - organisational and site guidelines regarding timber stacking and maintenance
 - policies and procedures relating to own role and responsibility
 - procedure manuals
 - provision of training to and supervision of employees
 - quality and continuous improvement processes and standards
 - recording and reporting requirements
- Risk assessment:**
- must include:
 - level and stability of individual packs
 - type of bearers
 - width, length and height of stack
 - weight of packs and stacks
 - duration of storage
 - type and strength of timber
 - type of lifting equipment
 - ground condition and stability in terms of slope, evenness, contamination and drainage
 - air-drying structure
 - unexpected obstacles
 - slippery or uneven surfaces

- pedestrians on or near the timber stack
- visibility
- powered mobile machinery equipment faults or damage
- ground strength to withstand the load of stacks and machinery
- hazards and risks
- location of walkways, pathways and stores
- top surface of ground
- location of stack:
 - inside
 - outside under cover
 - in the open
- involves consideration of:
 - monitoring and inspection procedures
 - storage area organisation
 - injury due to lifting, bending or crushing
 - machinery and equipment requirements
 - weather conditions

Avoidable loss may include:

- inadequate stack support
- packs that are not level
- exposing the stack to adverse drying conditions
- inadequate stack conditions (poor drainage, stacks close to ground, etc.)
- inappropriate site layout
- inadequate stack protection
- pack damage
- unstable stacking (e.g. large heavy packs on top of small light packs)
- timber that is stacked too high

Traffic management plan must:

- ensure pedestrians are separated from powered mobile plants
- allow safe entry and exit of mobile equipment and pedestrians
- where reasonably practicable, eliminate any identified risk
- identify the most efficient route of travel
- facilitate traffic flows
- reduce the frequency of interaction with powered mobile plant
- substitute a forklift with other suitable load shifting equipment

Safety equipment may include:

- PPE, such as gloves, glasses, high-visibility gear
- seatbelt on powered mobile plant
- mobile communication devices, such as telephone and two-way radio
- fire-fighting equipment

- Communication** may include:
- first-aid equipment
 - verbal and non-verbal language
 - active listening
 - use of positive, confident and cooperative language
 - questioning to clarify and confirm understanding
 - use of language and concepts appropriate to individual, social and cultural differences
 - control of voice
 - mobile communication protocols
- Limitations** may include:
- own competency level, including with regard to identifying risks
 - industry requirements
 - own interpretation of procedures
- Bearers** must:
- be straight and not have knots
 - be identical in length in cross-section
 - not protrude from the stack
 - not be shorter than the stack
 - be laid flat
 - be in good condition
 - be able to withstand the environment
 - be checked for consistent thickness and shape
 - be correctly positioned
- Routine checks** must include:
- inspecting stability of stack
 - ensuring stacks are not leaning or supported by other stacks
 - ensuring ground conditions are stable
 - ensuring no damage to rack sticks, bearers or restraints
 - eliminating effects of external forces, such as high winds
 - checking all stacks after high winds
 - yard maintenance, including removing waste
 - ensuring top of stack is within tolerances, in line with site requirements
- Repairs** must include:
- cordoning off area from pedestrian access
 - installing danger warning signage
 - replacing damaged racking sticks, bearers or restraints
 - stabilising ground conditions, including top surface
 - stabilising packs and stacks
 - partially or fully rebuilding packs and stacks
 - assessing need for additional restraints
 - tightening loose restraints
- Workplace records and documentation:**
- may include:
 - product type, size and quantity
 - inspection information, including date, issues, timelines,

- consultation conducted and authorised personnel
- grading and labelling
- quality outcomes
- storage locations
- despatch locations
- hazards and hazard control
- incidents
- equipment malfunctions
- date of creation
- and may be:
 - manual
 - computer-based system
 - other appropriate organisational communications systems

Unit Sector(s)

- Sawmilling and Processing
- Timber Manufactured Products
- Wood Panel Products
- Timber Merchandising
-

Custom Content Section

Not applicable.

FPICOT4201B Produce complex truss and frame plans and details using computers

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to use computerised systems to produce and detail complex truss or frame plans, including layout production, fabrication and installation instructions

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT4201A Produce complex truss or frame plans and details using computers

Application of the Unit

Application of the unit This unit involves producing complex truss or frame plans and details using computers in a forestry office setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Interpret plans and loading conditions | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to detailing truss or frame plans using advanced computerised systems are followed</p> <p>1.2. Drawings and documentation are obtained and work requirements interpreted and checked</p> <p>1.3. Plans are reviewed and <i>loading information</i> is interpreted</p> <p>1.4. Drawing views and notes are reviewed and additional design requirements and restrictions are identified and followed</p> <p>1.5. Additional information and data are obtained from <i>appropriate personnel</i> or sources</p> <p>1.6. Functional and pictorial <i>image of structure</i>, trusses or frames is created based on design requirements</p> <p>1.7. Design requirements outside normal <i>software</i> limitations are specified and appropriate assistance is sought</p> <p>1.8. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Test design options and select best option | <p>2.1. Fixed <i>design details</i> are transferred to layout data in line with software requirements</p> |

ELEMENT

PERFORMANCE CRITERIA

- | | | |
|----|--|---|
| 3. | Produce layouts and cutting requirements | <p>2.2. Frame or truss design types are specified and timber type and species are selected in line with <i>material</i> suitability and availability</p> <p>2.3. Common industry spacing of frames, trusses and their components are set to the defined design structure in line with industry standards</p> <p>2.4. Component sizes are fixed to clarify and firm design options</p> <p>2.5. Layouts, spacing and sizing of individual structural members are progressively selected in line with software requirements</p> <p>2.6. Design options are produced and design details selected, reviewed and revised in line with software and work order</p> |
| 3. | Produce layouts and cutting requirements | <p>3.1. Design records are reviewed for design integrity, completeness and consistency in line with applicable certifying authority standards</p> <p>3.2. Structure layout drawings and truss or frame <i>assembly drawings</i> are produced using software in line with workplace and software requirements</p> <p>3.3. Component cutting detail is produced in line with manufacturing requirements and schedules</p> <p>3.4. Design records and documentation are completed and maintained in line with workplace procedures</p> |
| 4. | Provide advice on design and production issues | <p>4.1. <i>Questions</i> regarding design and assembly requirements are answered and explained comprehensively in a clear and concise manner</p> <p>4.2. Effective communication techniques are used to assist and develop production personnel</p> <p>4.3. Alternative materials and sizes for components are provided within the scope of the design and work requirements</p> <p>4.4. Common site problems are discussed and prevention strategies are examined and adopted to ensure future site practice meets design requirements</p> |

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills include:

- Technical skills sufficient to safely and accurately produce complex truss or frame plans and details using computerised systems and provided software; design and detail timber trusses or frames that use available material and meet the required standards; produce drawings and cutting lists suitable for manufacture
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; complete, record and maintain information
- Literacy skills sufficient to interpret and apply relevant information, common industry terminology and specifications in written, diagrammatic and verbal form
- Numeracy skills sufficient to select appropriate mathematical and estimation processes
- Problem solving skills sufficient to identify problems and demonstrate appropriate response procedures

Required knowledge include:

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing complex truss or frame plans and details using computers
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for producing complex truss or frame plans and details using computers
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Procedures for recording, reporting and maintaining workplace records and information
- Procedures for applying building and structural regulations and site policy
- Range, types and uses of computer programs and software, including estimation software
- Common industry terminology for all component types
- Relationship between component loads, supports and spans and component loads, species, type, dimensions and grade
- Industry standard cross section sizes and profiles, length and spacing dimensions
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including

REQUIRED SKILLS AND KNOWLEDGE

calculating time to complete tasks

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can select and use computerised systems to accurately produce complex plans and details of trusses or frames; and provide advice on design and production issues

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to producing complex truss or frame plans and details
- following organisational policies and procedures relevant to producing complex truss or frame plans and details
- applying communication techniques and safe work practices in the work area
- interpreting plans, loading conditions and technical information and conveying information in written, sketch and verbal form
- using appropriate computer software, systems and techniques to accurately produce complex plans and details of trusses or frames
- testing design options, selecting best option and producing timely and accurate designs for manufacture and construction
- applying mathematical procedures, such as estimation and measurement
- providing design and production advice

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- lifts and cranes, scaffolding, building codes and regulations
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

- Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Loading information** may include:
- details defining mass loads and externally applied loads (wind, surrounding structures, common or special building usage)
 - dimensions defining geometry and loading of individual structural members
- Appropriate personnel** may include:
- clients
 - colleagues
 - line management
 - software support engineers
- Image of structure** may include:
- load support
 - loading transfer mechanisms
 - tying positions
- Software** is a commercial package running on suitable computer hardware and producing designs using specific truss or frame assembly hardware requirements

RANGE STATEMENT

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Design detail may include:

- timber component species, type, cross section, grade, length and cutting angles
- nail plate and other joining hardware sizes and marking requirements

and may be selected from options on the basis of:

- construction feasibility
- cost
- material availability
- customer preference and site standards
- material efficiency
- energy efficiency

Material:

- is selected with regard to exposure and weathering

and may include:

- timber of available species
- solid types
- laminated types

Assembly drawings may include:

- design assumptions regarding supporting and tying components
- and may be designed as wooden roof and floor trusses and wall frames for solid brick, brick veneer and timber frame domestic houses

Questions may include:

- certifying authority requirements
- building code requirements

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT4202B Design timber structures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit specifies the outcomes required to interpret plans, select options and detail designs of timber structures. It also requires the provision of support and explanation of designs

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT4202A Design timber structures

Application of the Unit

Application of the unit The unit involves designing timber structures in a timber and wood products production setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Interpret plans and loading conditions | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to designing timber structures are identified and followed</p> <p>1.2. <i>Drawings</i> and documentation are obtained and interpreted and <i>work requirements</i> are identified and complied with</p> <p>1.3. Plans are reviewed and interpreted and <i>loading information</i> is specified</p> <p>1.4. Drawing views and notes are interpreted and other design requirements and restrictions are specified</p> <p>1.5. Additional information and data is obtained from <i>appropriate personnel</i> and <i>other sources</i></p> <p>1.6. Functional and pictorial image of <i>structure</i> is created based on specified design requirements and constraints</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS and organisational requirements</p> |
| 2. Develop and select truss and/or frame and/or floor layout options | <p>2.1. Fixed design details are transferred to truss and/or frame and/or floor layout drawings</p> <p>2.2. Engineered or pre-assembled trusses and/or frames and/or floors are nominated in line with budgetary</p> |

ELEMENT**PERFORMANCE CRITERIA**

- constraints
- 2.3. Component sizes and spacing details are defined in the design structure in line with *industry standards*
- 2.4. *Layouts* and spacing of individual structural members are progressively selected to meet design requirements
- 2.5. Component sizes are fixed to clarify and firm design options
3. Detail truss and/or frame and/or floor design
- 3.1. Physical dimensions for components are calculated, scaled or extracted from tables of *applicable codes*
- 3.2. Effective lengths and spans for individual components are interpreted from layout, and cross-sections are selected in line with applicable codes
- 3.3. Selected *material options* are checked for suitability, availability, cost effectiveness and are consistently used throughout the design
- 3.4. Component placement and spacing are detailed to site and customer standards
- 3.5. Design specifications are provided for engineered or pre-assembled trusses and/or frames and/or floors in line with manufacturer's recommendations
- 3.6. Production information, dimensions and notes are presented in *detail*, clearly and accurately within drawing views
- 3.7. Design records and documentation are completed and maintained in line with workplace procedures
4. Provide design and production advice
- 4.1. Questions regarding designs and design decisions are answered and *explained* in a clear and concise manner
- 4.2. Effective communication techniques are used to assist and develop production personnel
- 4.3. Alternative materials and sizes for components are provided within the scope of the design and work requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to safely detail and design timber structures which meet required standards and budgetary constraints and to produce design drawings suitable for use on construction sites
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately complete, record and maintain information
- Numeracy skills sufficient to select appropriate mathematical processes to calculate design dimensions and measure lengths and spans
- Problem solving skills sufficient to identify problems and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for designing timber structures
- Organisational and site standards, requirements, policies and procedures
- Environmental protection requirements, including the safe disposal of waste material
- Quantitative relationship between component loads, supports and gains, and species, type, dimensions and grade
- Common industry terminology for all component types and timber cuts, all structure types and construction methods
- Industry standard cross-section sizes and profiles, length and spacing dimensions
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment relevant to designing timber structures and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can accurately interpret plans to develop and design timber structures in line with industry and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to designing timber structures
- following organisational policies and procedures relevant to designing timber structures
- communication techniques and safe work practices in the work area
- interpreting drawings and loading conditions
- interpreting and applying technical information and conveying information in written, sketch and oral form
- applying mathematical procedures such as estimation and measurement
- developing and selecting truss and/or frame and/or floor layout options and detailing framing design
- providing design and production advice
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

Context of and specific resources for assessment

EVIDENCE GUIDE

Method of assessment

- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised**

RANGE STATEMENT

wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- lifts and cranes, scaffolding, building codes and regulations

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes

RANGE STATEMENT

- and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Drawings** may be:
- direct to paper
 - using computer software
- Work requirements** may include:
- loading requirements
 - applicable codes
 - common industry practices
 - specific customer preferences
 - transport regulations
 - fabricating limitations
- Loading information** may include:
- details defining mass loads and externally applied loads (wind, surrounding structures, common/special building usage)
 - dimensions defining geometry and loading of individual structural members
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
 - software support engineers
- Other sources** may include:
- suppliers
 - manufacturers
 - architect
 - builder
 - local council
- Structures** may include:
- timber roofs
 - wall frames and floors of solid brick, brick veneer and timber frame domestic houses
 - free-standing or attached timber structures such as pergolas
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm

RANGE STATEMENT

- understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Industry standards** may include:
- Australian standards
 - international standards
 - nail plate provider standards
- Layouts**
- are selected to meet space and construction/assembly constraints and the most economical timber sizes and quantities
- Applicable codes** may include:
- AS1684 and supplementary tables
 - CSIRO supplementary tables
 - those from regulatory bodies and associations
 - the Building Code of Australia
- Material options**
- are selected with regard to exposure and weathering and may include timber of available species and solid or laminated types
- Detail**
- is in line with industry requirements for placement, projection and dimensions
- Explanations** may be provided to:
- customers
 - builders
 - councils
 - certifying authorities

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT4203B Plan and coordinate product assembly

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan the production of timber products, coordinate assembly processes and monitor output and distribution

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT4203A Plan and coordinate product assembly

Application of the Unit

Application of the unit

The unit involves planning and coordinating product assembly in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------|--|
| 1. Plan product assembly | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to planning and coordinating product assembly are identified and followed</p> <p>1.2. <i>Production orders</i> and product <i>assembly schedules</i> are set and communicated to personnel</p> <p>1.3. <i>Construction plans</i> and <i>jig</i> requirements are interpreted</p> <p>1.4. <i>Products</i> to be assembled and assembly techniques are explained to production personnel</p> <p>1.5. <i>Componentry</i> and required <i>material</i> availability are identified and monitored</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Monitor product assembly | <p>2.1. Product assembly procedures are reviewed for suitability to planned schedule</p> <p>2.2. Assembly processes are monitored for effectiveness of equipment and componentry</p> <p>2.3. Assistance is provided to personnel to evaluate components and assembly problems</p> <p>2.4. Product management and <i>output</i> are monitored to record possible process improvements</p> <p>2.5. Product assembly, major problems and equipment faults are investigated, <i>recorded and reported</i> in line with site requirements</p> |
| 3. Coordinate product | <p>3.1. Assembly operations and output are monitored to</p> |

ELEMENT	PERFORMANCE CRITERIA
assembly	<p>record and action possible process improvements, based on construction plans, components and material being used</p> <p>3.2.Modifications are made to assembly procedures or schedules to ensure optimum performance, which are then communicated to personnel</p> <p>3.3.Assembly improvement modifications are documented in line with site procedures</p> <p>3.4.Production output details are obtained and recorded in line with site requirements</p> <p>3.5.Completed products are checked and directed to <i>storage</i> or transferred to <i>transportation</i> for despatch</p> <p>3.6.Operating logs and product assembly records are completed and maintained to site standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; plan and coordinate product assembly; adjust assembly procedures in line with output requirements
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards and codes of practice relevant to the full range of processes for planning and coordinating product assembly
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of carbon emissions, and the cleaning of plant, tools and

REQUIRED SKILLS AND KNOWLEDGE

equipment

- Organisational and site standards, requirements, policies and procedures for planning and coordinating product assembly
- Environmental risks and hazards
- Using energy effectively and efficiently
- Construction plans for the production of timber products, including dimensions, component requirements and material specifications
- Assembly sequences
- Production scheduling
- Componentry and material
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and coordinate product assembly in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to planning and coordinating product assembly
- following organisational policies and procedures relevant to planning and coordinating product

EVIDENCE GUIDE

- assembly
- planning and coordinating product assembly for the enterprise
 - modifying production and schedules for product assembly within the enterprise
 - coordinating personnel to follow planning, communications and scheduling for product assembly
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment

EVIDENCE GUIDE

of other units of competency

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures

Environmental requirements

RANGE STATEMENT**may include:**

- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements**may include:**

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Production order is to include:

- instructions for the assembly and despatch of timber and timber products from the work site

and may include:

- construction plans or drawings
- type of product
- size
- quantity
- grade

RANGE STATEMENT

Assembly schedules	are estimated output and number of products to be assembled in a set time period, based on customer and production orders
Construction plans	are drafted or computer-generated product plans complete with dimensions, component requirements and material specifications
Jigs	are enterprise manufactured templates that assist in the positioning of components during the assembly process
Products may include:	<ul style="list-style-type: none">• pallets• crates• trellises• trusses• stairs• doors• windows• frames• beams
Componentry	is sections of timber or timber product that have been pre-cut in readiness for assembly and have been cut to follow the construction plans and cutting list
Material may include:	hardware such as: <ul style="list-style-type: none">• nailing plates• gang nails• nail gun nails• staples
Communication may include:	<ul style="list-style-type: none">• verbal and non-verbal language• constructive feedback• active listening• questioning to clarify and confirm understanding• use of positive, confident and cooperative language• use of language and concepts appropriate to individual social and cultural differences• control of tone of voice
Output is to include:	<ul style="list-style-type: none">• type

RANGE STATEMENT

- speed
- finish
- dimensional consistency
- quality

Records and reports may include:

- planning and monitoring outcomes
- operating logs
- production records
- material movement
- despatch outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Storage may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Transportation may include:

- trucks
- vans

RANGE STATEMENT

- ships
- trains

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT4204B Schedule and coordinate load shifting

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to schedule and coordinate load shifting activities for a range of load shifting plant and equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT4204A Schedule and coordinate load shifting

Application of the Unit

Application of the unit

The unit involves scheduling and coordinating load shifting in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| 1. Prepare for scheduling and coordination | 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to scheduling and coordinating load shifting are identified and followed
1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i>
1.3. Type of <i>load shifting equipment</i> to be <i>scheduled</i> and <i>coordinated</i> is assessed
1.4. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations
1.5. Scheduling and coordination process is planned in line with site procedures
1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Schedule load shifting | 2.1. Material handling requirements for loads are determined and <i>movement frequencies</i> are identified and followed
2.2. Variations in material handling requirements are assessed in line with site operations and despatch of products
2.3. Equipment operations for all sections of the organisation are assessed
2.4. Material handling schedules are altered to maintain optimal production and output |
| 3. Coordinate load | 3.1. Shifting of load arrangements are made with |

ELEMENT	PERFORMANCE CRITERIA
shifting	<p>designated personnel to maintain efficient use of load shifting equipment in line with OHS requirements</p> <p>3.2.Safety of yard, production area or other operating area is maintained through assessment of unsafe conditions, unsafe acts and congested areas</p> <p>3.3.Load movement is organised to limit multiple loads being moved at the same time in the same area</p> <p>3.4.Difficult load shifting situations and incidents are resolved safely in line with operating procedures</p> <p>3.5.Scheduling process and load shifting equipment faults are <i>recorded and reported</i></p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; schedule and coordinate load shifting; assess movement frequencies
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults, and demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for scheduling and coordinating load shifting
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for scheduling and coordinating load shifting

REQUIRED SKILLS AND KNOWLEDGE

- Environmental risks and hazards
- Using energy effectively and efficiently
- Applicable fall from heights regulations and compliance requirements
- Load shifting equipment and techniques
- Scheduling and coordinating methods
- Equipment allocation and personnel rostering
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently schedule and coordinate load shifting in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to scheduling and coordinating load shifting
- following organisational policies and procedures relevant to scheduling and coordinating load shifting
- scheduling and coordinating load shifting activities for the enterprise
- scheduling load shifting equipment or plant in line

EVIDENCE GUIDE

- Context of and specific resources for assessment**
- with production and output activities
 - coordinating personnel to follow scheduling and to use load shifting equipment or plant
 - Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- instructions to designated personnel for equipment allocation and usage, location and intended activity

Work order is to include:

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- supervisors
- suppliers
- clients
- colleagues
- managers

Appropriate personnel may include:

RANGE STATEMENT

Load shifting equipment may include:

- fork lifts
- loaders
- skid steer loaders
- dozers
- cranes
- truck-mounted loading cranes
- gantry cranes
- any other load shifting equipment or plant

Scheduling is to include:

- planned procedures for equipment and personnel to undertake activities that optimise production and output
- adjustments to this process when necessary

Coordinating

is the process of overseeing personnel to provide direction and instruction on activities and schedules

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Movement frequencies

are the amount of times or loads a piece of plant or equipment performs one task

Records and reports may include:

- scheduling and coordination outcomes
- material movement
- despatch outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational

RANGE STATEMENT

communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT4205B Coordinate log debarking operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to coordinate log debarking operations in order to control systems for quality output and monitor equipment performance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT4205A Coordinate log debarking operations

Application of the Unit

Application of the unit The unit involves coordinating log debarking operations in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------------|---|
| 1. Plan debarking operations | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to coordinating log debarking operations are identified and followed</p> <p>1.2. Variations in timber characteristics are assessed, recorded and reported to <i>operators</i></p> <p>1.3. <i>Debarking</i> schedules are produced and applied in line with site procedures</p> <p>1.4. <i>Log management</i> procedures including order information are planned, scheduled and communicated to sawyers</p> <p>1.5. <i>Diameters and lengths</i> are planned and prescribed</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Monitor debarking performance | <p>2.1. Standard diameters and lengths are reviewed for suitability to planned debarking schedules</p> <p>2.2. Debarking processes are monitored for accuracy of diameter and condition of debarked logs</p> <p>2.3. Assistance is provided to operators with the evaluation of logs and debarking problems</p> <p>2.4. Log management and <i>output</i> are monitored to record possible process improvements</p> <p>2.5. Debarking operations, major problems and equipment faults are investigated, <i>recorded and reported</i></p> |
| 3. Direct debarking | <p>3.1. Debarking operations and output are monitored to</p> |

ELEMENT	PERFORMANCE CRITERIA
operations	<p>record and action possible process improvements, based on diameters, lengths and logs being processed</p> <p>3.2.Modifications are made to diameters or schedules to ensure optimum performance, which are then communicated to operators</p> <p>3.3.Debarking improvement modifications are documented in line with site procedures</p> <p>3.4.Debarked log output details are obtained and recorded in line with site requirements</p> <p>3.5.Debarked logs are directed to <i>storage</i> or <i>transferred</i> for further processing</p> <p>3.6.Operating logs and processing records are completed and maintained to site standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; plan and coordinate log debarking operations
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for coordinating log debarking operations
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

- coordinating log debarking operations
- Environmental risks and hazards
- Using energy effectively and efficiently
- Log debarking procedures and management
- Standard diameters and lengths
- Log management information, including diameter range, curvature, faults, species and moisture content
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently coordinate log debarking operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to coordinating log debarking operations
- following organisational policies and procedures relevant to coordinating log debarking operations
- coordinating log debarking operations for the enterprise
- modifying debarking diameters and schedules for

EVIDENCE GUIDE

- debarking operations within the enterprise
- coordinating personnel to follow planning, communications and scheduling for log debarking operations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations,

RANGE STATEMENT

certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements may include:

Operators

are the personnel who operate the debarking plant and equipment to debark logs to prescribed diameters

Debarking

is the process of forcing a log through a debarking machine which strips the log bare of its bark, making the log available for further downstream processing, and outfeeding the bark for landscaping supplies

Log management is to include:

- assessing individual logs to include assessment of diameter range, curvature, faults, species and moisture content

and includes:

RANGE STATEMENT

Diameters and lengths are to include:

- handling of the log
- standard diameters and lengths that the debarking equipment can strip before becoming jammed or shuddering

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Output is to include:

- size
- quality
- quantity

Records and reports may include:

- planning and monitoring outcomes
- operating logs
- debarking records
- material movement
- despatch outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Storage may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

RANGE STATEMENT

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Transfer may include:

the use of:

- conveyor belt systems
- track systems

lifting equipment such as:

- fork lifts
- slings
- trolley jacks
- gantry cranes
- loaders

assistance with lifting, such as:

- involving two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT4206B Plan and coordinate boiler operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan the operation of a boiler and coordinate boiler operating personnel and the startup, shutdown and storing of a boiler

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT4206A Plan and coordinate boiler operations

Application of the Unit

Application of the unit

The unit involves planning and coordinating boiler operations in a variety of work settings, including saw mills, wood chip mills, veneer mills, board/plywood mills and timber treatment plants

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan boiler operation	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planning and coordinating <i>boiler</i> operations are identified and followed</p> <p>1.2. Boiler startup, operation and shutdown are planned in line with site requirements</p> <p>1.3. <i>Operation orders</i> and <i>schedules</i> are set and communicated to personnel</p> <p>1.4. <i>Generation levels</i> are calculated and communicated to operators</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Coordinate boiler startup and operation	<p>2.1. Pre-operational safety and <i>pre-startup checks</i> and procedures are checked with the operators</p> <p>2.2. Boiler startup is monitored for correct running conditions and is signed on</p> <p>2.3. Continued operation of boiler and its condition are routinely checked with operating personnel</p> <p>2.4. Problematic boiler operations are <i>diagnosed</i>, with adjustments calculated and communicated to operators</p> <p>2.5. <i>Boiler house</i> chemicals are checked for correct labelling in line with statutory and environmental</p>

ELEMENT	PERFORMANCE CRITERIA
3. Coordinate boiler shutdown and storage	<p>requirements</p> <p>2.6. Emergency shutdown procedures are followed in case of a fire</p> <p>2.7. Fuel efficiency recordings, calculations, operating log, boiler operation and equipment faults are recorded and reported</p> <p>2.8. Assistance is provided to personnel with the evaluation of boiler data and performance details</p> <p>2.9. Boiler management and output are monitored to record possible process improvements</p> <p>3.1. Shutdown and lock-out procedures are directed in line with OHS legislation and statutory and environmental regulations</p> <p>3.2. Condition of boiler is assessed and personnel are directed to undertake cleaning and maintenance requirements in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>3.3. Boiler is inspected, with valves and fittings removed, in line with statutory and environmental requirements</p> <p>3.4. Mode of storage is selected and personnel are directed to store boiler in line with statutory requirements</p> <p>3.5. Modifications are made to generation levels or schedules to ensure optimum performance, which are then communicated to personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; plan and coordinate boiler operations; monitor boiler output
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain

REQUIRED SKILLS AND KNOWLEDGE

documentation

- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and coordinating boiler operations
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and coordinating boiler operations
- Environmental risks and hazards
- Using energy effectively and efficiently
- Procedures for boiler startup, operation, shutdown and storage
- Energy generation levels
- Boiler scheduling and planning
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and coordinate boiler operations in line with organisational requirements

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to planning and coordinating boiler operations
- following organisational policies and procedures relevant to planning and coordinating boiler operations
- planning and coordinating boiler operations for the enterprise
- modifying production and schedules for boiler operations within the enterprise
- coordinating personnel to follow planning, communications and scheduling for boiler operations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required

EVIDENCE GUIDE

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements may include:**
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

- Boiler** is to include:
- steam-generating boilers, including liquid or vapour restricted to water or steam
 - fuel and fuel supply system
 - boiler operations in conjunction with other plant
- Operation order** is to include:
- instructions for the safe startup, operation, shutdown and storage of a steam boiler
- Schedules** are itineraries setting startup and shutdown times in line with steam plant generation requirements
- Generation levels** are to include:
- amount of steam produced
 - subsequent amount of energy generated as a result of the pressure
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Pre-startup checks** are conducted to ensure:
- equipment has been set up correctly
 - systems are performing accurately
 - equipment is operating to optimum performance
- Diagnosis** is to include:
- use of audio, visual and written information
 - water quality
 - chemical testing
- Boiler house** is normally the isolated room or building where the boiler is located
- Emergency shutdown** is the immediate shutting off of the equipment to prevent an accident or damage to the plant
- Records and reports** may include:
- fuel efficiency recordings and environmental impact
 - calculations
 - operating logs
 - storage location

RANGE STATEMENT

- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Boiler data may include:

- steam levels
- pressure levels
- energy generation levels
- heat build-up
- system overload information

Output

is the amount of energy produced to provide power to site operations

Shutdown

is the process of winding down the boiler and reducing pressure and steam until the system is cold and ready for cleaning and maintenance

Storage is to include:

- close down time the boiler is inactive
- procedures for shutdown

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT4207B Plan and coordinate heat plant operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan the operation of a heat plant and coordinate heat plant operating procedures and the startup, shutdown and storing of the heat plant

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT4207A Plan and coordinate heat plant operations

Application of the Unit

Application of the unit

The unit involves planning and coordinating heat plant operations in a variety of work settings, including saw mills, wood chip mills, veneer mills, board/plywood mills and timber treatment plants

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan heat plant operation	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planning and coordinating heat plant operations are identified and followed</p> <p>1.2. Recent heat plant performance is assessed for unusual signs of performance</p> <p>1.3. <i>Heat plant</i> startup, operation and shutdown are planned in line with site requirements</p> <p>1.4. <i>Operation orders</i> and <i>schedules</i> are set and communicated to personnel</p> <p>1.5. <i>Generation levels</i> are calculated and communicated to operators</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Coordinate heat plant startup and operation	<p>2.1. Pre-operational safety and <i>pre-startup checks</i> and procedures are checked with operators</p> <p>2.2. Heat plant startup is monitored for correct running conditions and is signed on</p> <p>2.3. Continued operation of heat plant and its condition are routinely checked with operating personnel</p> <p>2.4. Problematic heat plant operations are <i>diagnosed</i>, with adjustments calculated and communicated to operators</p>

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|---|--|
| 3. Coordinate heat plant shutdown and storage | <p>2.5. Heat plant chemicals are checked for correct labelling in line with statutory and environmental requirements</p> <p>2.6. <i>Emergency shutdown</i> procedures are followed in case of a fire</p> <p>2.7. Fuel efficiency recordings, calculations, operating log, heat plant operation and equipment faults are <i>recorded and reported</i></p> <p>2.8. Assistance is provided to personnel with the evaluation of <i>heat plant data</i> and performance details</p> <p>2.9. Heat plant management and <i>output</i> are monitored to record possible process improvements</p> <p>3.1. <i>Shutdown</i> and lock-out procedures are directed in line with OHS legislation, and statutory and environmental regulations</p> <p>3.2. Condition of heat plant is assessed and personnel are directed to undertake cleaning and maintenance requirements in line with site procedures, manufacturer recommendations and environmental requirements</p> <p>3.3. Mode of <i>storage</i> is selected and personnel are directed to store heat plant in line with statutory requirements</p> <p>3.4. Modifications are made to generation levels or schedules to ensure optimum performance, which are then communicated to personnel</p> |
|---|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely plan and coordinate heat plant operations; monitor heat plant output
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and coordinating heat plant operations
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and coordinating heat plant operations
- Environmental risks and hazards
- Using energy effectively and efficiently
- Procedures for heat plant startup, operation, shutdown and storage
- Energy generation levels
- Heat plant scheduling and planning
- Past performance analysis
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and coordinate heat plant operations in

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>line with organisational requirements</p> <p>The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to planning and coordinating heat plant operations • following organisational policies and procedures relevant to planning and coordinating heat plant operations • planning and coordinating heat plant operations for the enterprise • modifying production and schedules for heat plant operations within the enterprise • coordinating personnel to follow planning, communications and scheduling for heat plant operations
Context of and specific resources for assessment	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must

EVIDENCE GUIDE

also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment

RANGE STATEMENT

- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements

RANGE STATEMENT

(waste minimisation and disposal, recycling and re-use guidelines)

Heat plant is to include:

- energy generating heat plants

and may include:

- thermal oil heating systems
- gas burners
- dust systems, including extraction
- solid fuel systems
- steam generators
- fuel intake
- water intake
- oil flow (pump operation)
- hydraulic systems
- blowing down steam generators

Operation order is to include:

- instructions for the safe startup, operation, shutdown and storage of a heat plant

Schedules

are itineraries setting startup and shutdown times in line with heat plant generation requirements

Generation levels are to include:

- amount of heat produced
- subsequent amount of energy generated as a result of the pressure

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Pre-startup checks

are conducted to ensure:

- equipment has been set up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Diagnosis is to include:

- use of audio, visual and written information
- water quality
- chemical testing

RANGE STATEMENT

Emergency shutdown	is the immediate shutting off of the equipment to prevent an accident or damage to the plant
Records and reports may include:	<ul style="list-style-type: none"> • fuel efficiency recordings and environmental impact • calculations • operating logs • storage location • quality outcomes • hazards • incidents • equipment malfunctions <p>and may be:</p> <ul style="list-style-type: none"> • manual • a computer-based system • other appropriate organisational communication system
Heat plant data may include:	<ul style="list-style-type: none"> • heat levels • pressure levels • energy generation levels • heat build-up • system overload information
Output	is the amount of energy produced to provide power to site operations
Shutdown	is the process of winding down the heat plant and reducing heat until the system is cold and ready for cleaning and maintenance
Storage is to include:	<ul style="list-style-type: none"> • close down time the heat plant is inactive • procedures for shutdown

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT5201B Implement sustainable forestry practices

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and implement sustainable forestry practices. It requires an ability to undertake consultative and audit processes to assess the effectiveness of environmental management strategies and to identify areas for change or improved practice

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT5201A Implement sustainable forestry practices

Application of the Unit

Application of the unit

The unit involves implementing sustainable forestry practices in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for and implement sustainable forestry strategies	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to implementing <i>sustainable forestry practices</i> are identified and followed</p> <p>1.2. Environmental management strategies are developed and implemented using available resources in line with organisational guidelines</p> <p>1.3. <i>Consultative processes</i> are used to negotiate and agree strategy processes, objectives and timelines</p> <p>1.4. Strategies are assessed for effectiveness in reducing waste disposal in line with organisational environmental management policies</p> <p>1.5. Strategies are revised to ensure ongoing <i>improvement</i> in line with organisational requirements</p>
2. Manage integrity of water bodies	<p>2.1. Water is sourced and used from locations other than mains water, as required in line with organisational and legislative guidelines</p> <p>2.2. Run-off water is managed to optimise use and minimise <i>pollutants</i> in line with organisational environmental management practice</p> <p>2.3. Planting strategies are developed to efficiently and appropriately use available water supply and manage</p>

ELEMENT	PERFORMANCE CRITERIA
3. Manage integrity of soil	<p>run-off</p> <p>2.4. <i>Irrigation/watering strategies</i> are developed in line with organisational guidelines</p> <p>3.1. Wind and water erosion is minimised by planting patterns and species</p> <p>3.2. Nutrients and texture of the soil are managed to maintain soil productivity</p> <p>3.3. Irrigation/watering strategies are developed in line with organisational guidelines</p>
4. Undertake an environmental audit	<p>4.1. Need for environmental audit is determined and audit is conducted in line with organisational policies and procedures</p> <p>4.2. Environmental <i>considerations</i> are covered in the audit, in line with organisational policies and legislative requirements</p> <p>4.3. Recommendations are developed that are verifiable and sufficiently detailed to meet audit and organisational requirements</p> <p>4.4. Business equipment and technology are used to access, analyse and organise information in line with organisational requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to recognise common diseases, pests and nutrition deficiencies
- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to prepare a range of reports, documentation and submissions where precise meaning is required
- Numeracy skills sufficient to analyse qualitative and quantitative information and data
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for implementing sustainable forestry practices
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of carbon emissions, and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for implementing sustainable forestry practices
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Procedures for developing and implementing a range of environmental management strategies
- Energy flow and food web frameworks
- Stages of nutrient cycling
- Principles of sustainable agriculture systems
- Principles of composting and waste management
- Soil testing processes and procedures and results interpretation
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently implement sustainable forestry practices in line with organisational and legislative guidelines

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to implementing sustainable forestry practices
- following organisational policies and procedures relevant to implementing sustainable forestry practices
- communicating and consulting with colleagues and stakeholders to obtain feedback and negotiate strategic processes, objectives and timelines in order to implement sustainable forestry practices
- using business equipment and technology to prepare and implement environmental management strategies using available resources and incorporating sound environmental management practices
- auditing and evaluating environmental management strategies and implementing identified changes and improved practices

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements

RANGE STATEMENT

- Sustainable forestry practices** may include:

 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - management of fire and weeds
 - soils, including tropical soils
 - tropical forestry practices
- Consultative processes** may include:

 - face-to-face meetings
 - telephone
 - facsimile
 - written and email communication
- Improvement** may include:

 - ongoing waste reduction
 - energy and water efficiency
 - taking advantage of newly available technologies
- Pollutants** may enter the river and drainage systems
- Irrigation/watering strategies** may include:

 - minimising evaporation
 - run-off
 - accurate delivery of water
- Considerations** may include:

 - topography
 - water use
 - current policies and practices
 - waste emissions and materials
 - energy use
 - characteristics of area
 - legal obligations
 - sustainable forestry management

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT5202B Manage forestry information and interpretations programs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to manage strategies for the delivery of forestry information and interpretations programs. The unit includes planning, promoting and reviewing programs

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT5202A Manage forestry information and interpretations programs

Application of the Unit

Application of the unit

The unit involves managing forestry information and interpretations programs in a forestry office setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify information and interpretations programs strategies	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to managing forestry information and interpretations programs are identified and followed</p> <p>1.2. Additional information relevant to <i>information and interpretations programs</i> is sought and obtained as required</p> <p>1.3. <i>Strategies</i> for information and interpretations programs are determined in line with <i>client groups</i> and organisational requirements</p> <p>1.4. Mechanisms are established to monitor <i>trends and developments</i> in order to provide effective information and interpretations programs</p> <p>1.5. Information on accurate evaluation of industry trends, client needs, community issues and organisational practices is gathered</p>
2. Plan information and interpretations programs	<p>2.1. Topics of information and interpretations programs are determined and developed in consultation with <i>appropriate personnel</i></p> <p>2.2. Information and interpretations programs are integrated with other relevant organisational programs and <i>activities</i></p> <p>2.3. Measurable performance indicators and mechanisms</p>

ELEMENT	PERFORMANCE CRITERIA
	are determined and documented
	2.4. Plan and its performance indicators are clearly documented and communicated to appropriate personnel
	2.5. Communication with others is established and maintained in line with OHS requirements
3. Promote information and interpretations programs	3.1. Information and interpretations programs are promoted in line with documented plan and workplace procedures
	3.2. Mechanisms are established, implemented and monitored to promote information and interpretations programs to appropriate personnel
	3.3. Information on planned information and interpretations programs is made widely available to appropriate client groups
	3.4. Promotional activities are monitored for effectiveness in consultation with client groups and appropriate personnel
4. Evaluate information and interpretations programs	4.1. Information and interpretations programs are evaluated against documented plan and objectives
	4.2. Programs are analysed to verify effectiveness in meeting objectives and to identify improvements to future information and interpretations programs
	4.3. Recommendations for future programs are prepared, based on consultation conducted and findings of analysis
	4.4. Program processes are recorded and reported to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others; negotiate and

REQUIRED SKILLS AND KNOWLEDGE

liaise with internal and external bodies and groups; prepare and manage effective exhibitions; research and present information orally and in writing to a wide range of individuals and groups, including conveying complex concepts and ideas

- Literacy skills sufficient to record and maintain information relating to forestry information and interpretations programs; collate and assess information against specified criteria; prepare and edit explanatory material for the general public
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and demonstrate appropriate response procedures; manage staff, projects and budgets to achieve specified outcomes

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing forestry information and interpretations programs
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for managing forestry information and interpretations programs
- Environmental risks and hazards
- Criteria for recycling and re-using timber/material with defects
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Potential community issues in relation to forests and forests products
- Media relations and marketing principles and processes
- Recognition of trainee, participant or client characteristics, including language, literacy and numeracy skills, cultural background, and previous experience and knowledge
- Appropriate training locations within a workplace
- Computer-based presentation techniques and tools
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can determine effective strategies for information and interpretations programs; and plan, monitor and promote information and interpretations programs to meet client and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- followed applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing forestry information and interpretations programs
- followed organisational policies and procedures relevant to managing forestry information and interpretations programs
- undertaking consultation to assess and determine strategies for information and interpretations programs
- verifying topics and measurable performance indicators for information and interpretations programs
- implementing, evaluating and promoting information and interpretations programs and introducing improvements where necessary

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE

- workplace location or simulated workplace
- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different

RANGE STATEMENT

work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines

Organisational requirements may include:

RANGE STATEMENT

- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Information and interpretations programs

aim to enhance the understanding and skills of a range of clients for a range of purposes and reflect a wide knowledge of forest growing and management resources and practices

Strategies may reflect:

- organisational strategies and plans
- priorities and budget requirements
- in-depth knowledge of client groups and awareness of their changing information needs, requirements and expectations
- awareness of current practice in similar organisations
- innovative ways to provide information and interpretations programs

Client groups may include:

- people at any level in the organisation who operate within or for the forest
- people outside the organisation who operate within or for the forest
- people affected by organisational decisions or actions
- people to whom the organisation should provide such a service to meet public and social accountability requirements
- school children
- people with an interest in the forest

Trends and developments may be:

- theoretical
- practical

Appropriate personnel may

- senior management representatives

RANGE STATEMENT

include:

- client group representatives
- technical specialists within the organisation
- internal education, training and development staff
- outside experts

Activities may include:

- seminars
- talks
- lectures
- information in in-house publications
- exhibitions
- media releases
- technology-based training
- skills-based training
- marketing and promotional programs

Plan may include:

- incorporating measurable objectives and mechanisms to evaluate information and interpretations programs
- reflecting strategies that are determined and developed through consultation
- taking account of staff competencies and ways to develop and improve such competencies
- documenting promotional activities

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Records and reports may include:

- scheduling and coordination outcomes
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational

RANGE STATEMENT

communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT5203B Manage installation and commissioning of equipment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to plan and manage the installation and commissioning of equipment in a manner that minimises disruption and facilitates continuing optimum production outcomes

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPICOT5203A Manage installation and commissioning of equipment

Application of the Unit

Application of the unit The unit involves managing the installation and commissioning of equipment in a forest office setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to managing the installation and commissioning of equipment are identified and followed</p> <p>1.2. <i>Equipment</i> items to be included in work plan and specification document are specified and checked</p> <p>1.3. <i>Work plan for installation and commissioning</i> of equipment and systems is drawn up, including management and reporting procedures</p> <p>1.4. <i>Specifications</i> are checked for intended operating conditions</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Coordinate and monitor installation compliance	<p>2.1. Arrangements for installing and commissioning equipment including necessary legal, insurance, safety and environmental requirements are coordinated in line with workplace and legislative procedures</p> <p>2.2. <i>Contract arrangements</i> for the installation and commissioning of equipment and systems are coordinated in line with workplace procedures</p> <p>2.3. Installation process, including <i>testing</i>, is monitored</p>

ELEMENT	PERFORMANCE CRITERIA
	to ensure compliance with contractual requirements
	2.4. Variations are dealt with to ensure installation meets specification requirements
3. Manage installation schedules, legalities and budgets	3.1. Installation process is monitored to ensure compliance with installation specifications, schedule and budget
	3.2. Scheduling and budgeting processes are adjusted in line with variations or alternative plans
	3.3. Deviations are documented and reported
	3.4. Formal organisational processes are used to document the administration of regulatory requirements
	3.5. Legal, environmental and OHS requirements related to installing and commissioning equipment and systems are identified and followed
	3.6. Monitoring of the process is carried out to ensure compliance with legal, environmental and OHS requirements related to installing and commissioning equipment and systems
4. Conduct trials to confirm operating status of equipment	4.1. Equipment operations are evaluated in a trial run and results are checked against requirements
	4.2. Equipment is adjusted to achieve performance outcome specifications
	4.3. Employee duties are communicated to match equipment operating requirements
	4.4. Maintenance documentation is completed and processed
	4.5. Process and machine specification documentation is completed and appropriate records are maintained
	4.6. Completed work is assessed to confirm required specifications have been met
	4.7. Records and reports on work completed are prepared in line with enterprise procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely manage the installation and commissioning of equipment
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing the installation and commissioning of equipment
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for managing the installation and commissioning of equipment
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Equipment operations and installation procedures
- Commissioning procedures
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently manage the installation and commissioning of equipment in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing the installation and commissioning of equipment
- following organisational policies and procedures relevant to managing the installation and commissioning of equipment
- managing the installation and commissioning of equipment within the enterprise

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements

RANGE STATEMENT

- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Equipment** is to include:
- all machinery and equipment available for production purposes
 - subsequent maintenance within the enterprise
- Work plan** is to include:
- the installation and commissioning sequence
 - use of equipment
 - labour requirements
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Installation** is the process of setting equipment to undertake the sequence of work and output required
- Commissioning** is the process of verifying that the equipment is operating safely and in line with its intended purpose
- Specifications** are to include:
- size of equipment
 - capacity
 - output
 - power
 - maintenance requirements
 - safety details
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Contract arrangements** may include:
- installation
 - alignment and adjustment
 - operator training
 - testing

RANGE STATEMENT

	<ul style="list-style-type: none">• backup support
Testing	is operation in production mode to trial all aspects of the equipment to ensure accuracy and safety of the equipment
Schedule may include:	<ul style="list-style-type: none">• work schedules for personnel• scheduling of processing work• scheduling of equipment downtime
Trial run	see testing
Maintenance is to include:	<ul style="list-style-type: none">• proactive and reactive approaches to maintenance• scheduled and emergency maintenance activities• shutting down of equipment• stripping equipment• checking, repairing or replacing parts or consumables
Records and reports may include:	<ul style="list-style-type: none">• installation and commissioning outcomes• operating logs• performance records• quality outcomes• hazards• incidents• equipment malfunctions and may be: <ul style="list-style-type: none">• manual• a computer-based system• other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT5204B Organise enterprise maintenance programs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to establish, organise and implement preventative and reactive maintenance programs and capabilities required to optimise operational and production performance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT5204A Organise enterprise maintenance programs

Application of the Unit

Application of the unit The unit involves organising enterprise maintenance programs in a forest office setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Verify maintenance requirements	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to organising enterprise maintenance programs are identified and followed</p> <p>1.2. <i>Equipment</i> specifications, service requirements and workplace procedures are checked for recommended <i>maintenance</i> intervals and processes</p> <p>1.3. Special requirements for maintenance are separated from normal lubrication, adjustment and day-to-day maintenance schedules</p> <p>1.4. Comparisons with previous maintenance, intended equipment use, production requirements and standard operating procedures are made</p> <p>1.5. Outline <i>plan</i> for maintenance and related work <i>schedule</i> are developed and specified</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Establish maintenance systems	<p>2.1. Costs for process are identified and followed, based on work schedule, equipment manufacturer recommendations, and charges for materials, equipment, consumables and labour</p> <p>2.2. Production interruptions, processes and procedures are documented and recorded</p>

ELEMENT**PERFORMANCE CRITERIA**

- 2.3. Internal and external *maintenance providers* are specified
- 2.4. Maintenance system options are analysed and recommendations are reported to the *appropriate personnel*
- 2.5. Approvals for maintenance system concepts and resources are obtained
3. Organise maintenance activities
- 3.1. Production schedules and staff rosters are checked to verify time when the maintenance process may be scheduled, including optimal timing for *shutdown*
- 3.2. Permission from appropriate personnel is obtained for timing of maintenance to optimise the maintenance process and production
- 3.3. Detailed work plans are developed in line with production schedules, availability of expertise, scheduling of resource availability, and environmental requirements
- 3.4. Employees with the required competencies are allocated to maintenance activities
- 3.5. Approvals for production schedule, employee work pattern and maintenance schedule adjustments are obtained
- 3.6. Work plan is refined to ensure the maintenance program will maintain workplace outputs in line with organisational and environmental requirements
- 3.7. *Consumables*, equipment and *expertise* are located and coordinated to meet maintenance work schedule
- 3.8. Externally sourced equipment, consumables and expertise are located and procured
4. Complete maintenance procedures
- 4.1. Maintenance work schedule is completed in line with the work plan
- 4.2. Appropriate readings, measurements and recordings are made and compared to equipment, product and other relevant specifications
- 4.3. Areas requiring further testing are identified and monitored and appropriate procedures for testing are recommended to appropriate personnel
- 4.4. Adjustments to the work schedule and plan are made based on experience, and documentation is completed
- 4.5. Maintenance *records and reports* are completed and forwarded to appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely organise enterprise maintenance programs
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and maintain information relating to organising enterprise maintenance programs
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for organising enterprise maintenance programs
- Environmental protection requirements, including the safe disposal of waste material, the safe disposal of waste material (including preservative treated timber), the safe use and storage of chemicals, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for organising enterprise maintenance programs
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Costs of material, consumables and labour
- Maintenance procedures and methodologies
- Enterprise work schedules
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently organise enterprise maintenance programs in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to organising enterprise maintenance programs
- following organisational policies and procedures relevant to organising enterprise maintenance programs
- organising enterprise maintenance programs in line with organisational requirements

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Equipment** is to include:
- all machinery and equipment available for production purposes
 - subsequent maintenance within the enterprise
- Maintenance** is to include:
- proactive and reactive approaches to maintenance
 - scheduled and emergency maintenance activities
 - shutting down of equipment
 - stripping equipment
 - checking, repairing or replacing parts or consumables
- Plan** is to include:
- maintenance sequence
 - use of consumables
 - labour requirements
- Schedule** may include:
- work schedules for personnel
 - scheduling of processing work
 - scheduling of equipment downtime
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Maintenance providers** may include:
- internal personnel, including either dedicated maintenance personnel or equipment operators allocated to routine maintenance activities
 - external specialist providers hired by the

RANGE STATEMENT

- Appropriate personnel** may include:
- enterprise
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Shutdown** is to include:
- procedures for equipment lock-out, such as:
 - protecting operators and co-workers from accidental injury by isolating equipment from the power source
 - taking equipment off-line from normal production activities
- Consumables** are to include:
- regular replacement parts
 - lubricants and fluids associated with equipment
- Expertise** may include:
- specialist maintenance organisations
 - maintenance consultants
 - environmental issues
- Records and reports** may include:
- equipment type and size
 - inspection outcomes
 - quality outcomes
 - hazards
 - incidents
 - malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT5205A Develop biohazard contingency plans

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to develop a contingency plan in the event of a biohazard infestation of forests, plantations or timber products

General workplace legislative and regulatory requirements apply to this unit. Specific requirements apply to environmental requirements and are referred to in State, Territory and federal environmental control regulations

Application of the Unit

Application of the unit The unit involves developing biohazard contingency plans in a variety of work settings including:

- forest environment
- hardwood and softwood plantation environment
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- timber and wood products production
- timber and wood products sales and service
- other settings such as farms, agriculture, workshops, domestic, nursery, local council applications, as applicable to the unit

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Review legal and system requirements	1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to developing biohazard contingency plans are identified and followed 1.2. Documentation requirements for <i>traceability chain</i> is reviewed for implementation to meet appropriate standards 1.3. Organisational requirements and contingency possibilities are evaluated 1.4. <i>Communication protocols</i> are identified for inclusion in the contingency plan
2. Prepare a contingency plan	2.1. Range of <i>potential biohazards</i> are evaluated for potential environmental impact and economic damage 2.2. <i>Risk assessment</i> is completed for relevant

ELEMENT	PERFORMANCE CRITERIA
	biohazards
	2.3. <i>Economic damage potential</i> is estimated for relevant biohazards
	2.4. <i>Infestation treatments</i> are identified and action plans included in the contingency plan
	2.5. <i>Controls</i> to limit the spread of infestation are developed and action plans included in the contingency plan
	2.6. Operational procedures are reviewed to ensure adequate risk safeguards and contingency plans are in place
	2.7. Communication protocols are incorporated in the contingency plan
	2.8. <i>Training and induction processes</i> for workforce involved with implementation of the contingency plan are documented
3. Ensure effectiveness of contingency plan	3.1. <i>Support and resources</i> are provided to enable the ongoing functionality of the contingency plan
	3.2. <i>Continuous improvement processes</i> appropriate to the enterprise are implemented to ensure the plan remains effective and required changes are agreed
	3.3. Activities are monitored on an ongoing basis to identify potential biohazards

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to understand how the requirements of pest and disease legislation apply to the workplace
- Communication skills sufficient to explain the contingency plan and its requirements to all elements of the workforce
- Literacy skills sufficient to write a contingency plan and subsequent documentation
- Numeracy skills sufficient to understand input and output figures and calculate potential economic damage
- Problem solving skills sufficient to apply the requirements of the contingency plan to the particular scenario in which it may be implemented

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for developing biohazard contingency plans
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for developing biohazard contingency plans
- Environmental risks and hazards
- Minimising environmental impact
- Principles behind the development of a contingency plan
- Continuous improvement processes and systems
- Established communication channels and protocols including notification of authorities
- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for assessing economic impact and calculating disease impact
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they understand what is required to develop a biohazard contingency plan

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to developing biohazard

EVIDENCE GUIDE

- contingency plans
- following organisational policies and procedures relevant to developing biohazard contingency plans
 - preparing a contingency plan to control biohazards for an organisation
 - reviewing the effectiveness of the contingency plan in controlling biohazards in the organisation
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency

EVIDENCE GUIDE

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Traceability chain

is a register of documents used for certification, audit and quality purposes, and may include:

- timber source documents
- processing records
- quality records
- numbering/labelling systems

Communication protocols

are established communication channels and may include:

- notification of pest and/or disease infestation to authorities

RANGE STATEMENT

Potential biohazards must include:

- fungal hazards
- viral hazards
- bacterial hazards
- insect hazards
- vertebrate hazards

Risk assessment

is an evaluation of the likelihood and the consequences of a biohazard infestation including potential social and environmental impact

Economic damage potential

is an estimate of the economic consequences of the biohazard infestation and may include:

- loss of forest values
- loss of current markets
- loss of potential markets
- damage to trading status

Infestation treatments

are the range of potential treatments to control the biohazard and may include:

- eradication
- quarantine
- fumigation
- use of pesticides
- use of biological controls
- culling of infected plants

Controls

are methods used to control the infestation and limit the spread, and may include:

- quarantine
- isolation
- elimination

Training and induction processes

are the processes required to induct personnel into the contingency plan and may include:

- staff meetings
- training manuals
- questioning of personnel to ensure understanding
- assessment

Support and resources may include:

- allocation of staff duties
- capability to develop and produce relevant documents

Continuous improvement

- quality circles

RANGE STATEMENT

processes may include:

- after action reviews
- improvement plans

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT5206B Implement forestry chain of custody certification system

Modification History

Version	Comments
Version 1.1	Released with FPI11 Training Package Version 2. Reference added to specific legislation in required knowledge item. Equivalent to FPICOT5206A Implement Forestry Chain of Custody certification system.
Version 1	First released with FPI11 Training Package Version 1.

Unit Descriptor

Unit descriptor This unit describes the outcomes required to implement a forestry chain of custody certification system.

Application of the Unit

Application of the unit The unit involves implementing forestry chain of custody certification system/s in a variety of work settings including:

- forest environment (native and plantation)
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- timber and wood products production
- timber and wood products sales and service
- other settings such as farms, agriculture, workshops, domestic, nursery, local council applications, as applicable to the unit

The skills and knowledge required for competent workplace performance are to be used within the scope of

the person's job and authority.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit. Subject to enterprise requirements specific licences/certification may be required in the following areas: all occupational health and safety and environmental requirements that are raised in the Australian Standard (AS) 47072006 Chain of custody for certified wood and forest products.

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Confirm system requirements

- 1.1. Applicable ***Occupational Health and Safety (OHS), environmental, legislative and organisational requirements*** relevant to implementing a forestry chain of custody certification system are identified and followed
- 1.2. Key requirements of the legislation are clarified to confirm understanding and ensure consistency of interpretation and application

ELEMENT	PERFORMANCE CRITERIA
2. Comply with system requirements	<p>1.3. Relationship between chain of custody certification and <i>forestry certification systems</i> is clarified to ensure integration and compatibility of both systems</p> <p>1.4. Documentation requirements for <i>traceability chain</i> are reviewed to ensure effective workplace implementation to appropriate standards</p> <p>2.1. <i>Systems manual</i> is reviewed for applicability to work areas within the organisation</p> <p>2.2. <i>Internal auditors</i> of the chain of custody system are appointed and appropriate training conducted</p> <p>2.3. Traceability chain records are distributed and appropriate personnel instructed on how to enter relevant information</p> <p>2.4. Training and induction on systems manual is conducted for work areas covered by the chain of custody system</p> <p>2.5. Chain of custody activities are managed across work areas so that non-compliance is minimised</p> <p>2.6. Incidents of non-compliance are reported in line with legislative and workplace requirements</p> <p>2.7. Traceability chain records are completed and stored in line with systems manual requirements</p> <p>2.8. Inadequacies in systems manual which may contribute to non-compliance are raised in line with workplace procedures</p>
3. Provide system support	<p>3.1. <i>Audit recommendations</i> are incorporated into <i>improvement plans</i> to rectify non-compliance or improve processes</p> <p>3.2. Contributions are made to the <i>continuous improvement process</i> to ensure the system remains effective</p>
4. Document the operation and monitoring of the system	<p>4.1. Information on the operation of the system is prepared and disseminated to relevant internal and external personnel in line with the system communication plan</p> <p>4.2. Periodic reports on the operation of the system identifying any operational problems are prepared and disseminated to relevant internal and external personnel</p> <p>4.3. Reports on any identified breaches of compliance are prepared and disseminated to relevant internal and external personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to implement the requirements of the chain of custody system in the workplace
- Communication skills sufficient to explain the chain of custody system and its requirements to all elements of the workforce; conduct training/information sessions for internal and external personnel on the requirements of the system
- Literacy skills sufficient to prepare the appropriate information and reports for the chain of custody system
- Numeracy skills sufficient to understand the number of personnel that are required in the implementation of the chain of custody system
- Problem solving skills sufficient to implement the chain of custody system as required in the workplace, minimising non-compliance

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for implementing forestry chain of custody certification system, including the Illegal Logging Prohibition Act 2012 and related or superseding legislation
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for implementing forestry chain of custody certification system
- Environmental risks and hazards
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Ability to implement the workplace chain of custody system
- All stages of the workplace flow and its likely impact on the chain of custody system
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks

REQUIRED SKILLS AND KNOWLEDGE

- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can understand what is required to implement a chain of custody system in their workplace to meet AS 47072006 Chain of custody for certified wood and forest products

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to implementing a forestry chain of custody certification system
- following organisational policies and procedures relevant to implementing a forestry chain of custody certification system
- an understanding of the key legislative requirements for implementing a forestry chain of custody system in their workplace
- reviewing the system manual for applicability to work areas
- providing training and induction on the chain of custody system to internal auditors and other personnel in the workplace
- managing chain of custody activities across work areas so that non-compliance is minimised
- reporting incidents of non-compliance in line with legislative and workplace requirements
- providing support to the chain of custody system to ensure that it remains effective
- preparing reports on the operation and monitoring of the chain of custody system for internal and external

EVIDENCE GUIDE

- personnel
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to comply with relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

<p>Organisational requirements may include:</p>	<ul style="list-style-type: none"> • Australian Standards • confidentiality and privacy • OHS • the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care • legal • organisational and site guidelines • AS 47072006 Chain of custody for certified wood and forest products • policies and procedures relating to own role and responsibility • procedural manuals • continuous improvement processes and standards • OHS, emergency and evacuation procedures • ethical standards • recording and reporting requirements • equipment use and maintenance and storage requirements • environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
<p>Forestry certification systems must include:</p>	<ul style="list-style-type: none"> • Australian Forestry Standard • Forestry Stewardship Council
<p>Traceability chain</p>	<p>is a register of documents used for certification, audit and quality purposes, and may include:</p> <ul style="list-style-type: none"> • timber source documents • processing records • quality records • numbering/labelling systems
<p>Systems manual</p>	<p>is a manual detailing the chain of custody certification system and its application to the workforce including processes and procedures</p>
<p>Internal auditors</p>	<p>are people identified within an organisation to conduct auditing to ensure compliance with the system</p>

RANGE STATEMENT

Audit recommendations

are recommendations or rectifications made by internal or external auditors to ensure compliance with the chain of custody system

Improvement plans

are internal documents written to ensure a process for implementing audit recommendations

Continuous improvement process may include:

- quality circles
- after action reviews
- improvement plans

Unit Sector(s)

Not Applicable.

Competency field

Competency field

Common Technical

FPICOT5207A Implement sustainability in the workplace

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to manage the implementation of sustainability in the workplace

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves managing the implementation of sustainability in the workplace in operations of all sizes in a variety of work settings, including:

- forest environment
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- forest products factory
- forest products sales and service
- horticultural
- domestic
- local council
- emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| <p>1. Participate in the review of requirements for sustainability in the workplace</p> | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to managing the implementation of <i>sustainability</i> in the workplace are identified and followed</p> <p>1.2. Existing policies and procedures for the workplace are reviewed in relation to sustainability requirements</p> <p>1.3. Information is provided to assist in defining the <i>scope of sustainability requirements</i> for the workplace</p> <p>1.4. Recommendations for changes to policies, procedures and operational activities to meet requirements for sustainability in the workplace are documented and feedback is provided to <i>appropriate</i></p> |
|---|---|

ELEMENT	PERFORMANCE CRITERIA
	<i>personnel</i>
	1.5. Feedback on draft policy and strategies to effectively integrate sustainability within operational areas is provided to appropriate personnel
2. Prepare for implementation	2.1. Sustainability policy and implementation strategies are evaluated in consultation with appropriate personnel
	2.2. Targets and indicators are assessed in consultation with appropriate personnel
	2.3. Resource requirements and timelines are determined in consultation with appropriate personnel
	2.4. Procedures and processes to facilitate the implementation are established in consultation with appropriate personnel
	2.5. Sustainability in the workplace policy and procedures including expected targets and outcomes are communicated to relevant staff
	2.6. Action plans are developed with relevant responsibilities and timelines
3. Manage the implementation process	3.1. Implications for the management of sustainability and proposed changes in the workplace are determined in consultation with appropriate personnel
	3.2. Support is provided to staff to meet sustainability in the workplace responsibilities and to implement action plans
	3.3. Achievements against action plans are monitored and plans are updated as appropriate
	3.4. Processes are developed to ensure that an integrated ongoing review is part of the organisation's policy and procedures for sustainability in the workplace
4. Evaluate the implementation of sustainability in the workplace	4.1. Targets and indicators are evaluated and assessed on an ongoing basis
	4.2. Recommendations are made for improvements as a result of evaluation findings
	4.3. Changing trends and opportunities relevant to the enterprise are evaluated and taken into consideration for ongoing improvements
	4.4. Reports are provided to stakeholders and appropriate personnel on the outcomes of the evaluation and recommendations are made for

ELEMENT**PERFORMANCE CRITERIA**

- further development and improvement
- 4.5. Feedback is sought from stakeholders and appropriate personnel and an action plan is developed for ongoing improvements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use software and communication systems to analyse, create and present reports to manage implementation systems and procedures to aid in the achievement of sustainability in the workplace
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to read and evaluate complex and formal documents, such as policy and legislation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify work requirements; identify problems; develop and implement appropriate response procedures
- Planning and organisational skills sufficient to plan the implementation process

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing sustainability in the workplace
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the cleaning of plant, tools and equipment, returning the environment to its original or near to original condition on completion of activity, and the minimisation of carbon emissions and noise
- Organisational and site standards, requirements, policies and procedures for managing sustainability in the workplace
- Principles, practices and available tools and techniques of implementing sustainability in the workplace
- Quality assurance systems
- Environmental risks and hazards
- Using energy effectively and efficiently

REQUIRED SKILLS AND KNOWLEDGE

- Using material effectively and efficiently
- Sustainability principles and concepts
- Established communication channels and protocols
- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can manage the implementation of sustainability in the workplace

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing the implementation of sustainability in the workplace
- following organisational policies and procedures relevant to managing the implementation of sustainability in the workplace
- communicating effectively and working safely with others in the workplace
- participating in the review of requirements for sustainability in the workplace
- developing action plans for the implementation of sustainability in the workplace
- managing the implementation of sustainability in the workplace
- evaluating targets and indicators and making recommendations for improvement
- preparing reports for stakeholders and appropriate

EVIDENCE GUIDE

Context of and specific resources for assessment	<p>personnel on the outcomes of evaluating targets and indicators</p> <ul style="list-style-type: none">• developing an action plan for ongoing improvements• Competency is to be assessed in the workplace or realistically simulated workplace• Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints• Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context• Assessment is to follow relevant regulatory or Australian Standards requirements• The following resources should be made available:<ul style="list-style-type: none">• workplace location or simulated workplace• materials and equipment relevant to undertaking work applicable to this unit• specifications and work instructions
Method of assessment	<ul style="list-style-type: none">• Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge• Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies• Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency• The assessment environment should not disadvantage the candidate• Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Sustainability may include:

- reduction, recycling or elimination of waste and ecologically incompatible by-products
- elimination of chemical substances or physical agents and conditions that present hazards to human health or the environment
- conservation of energy and materials
- use of forms of energy and materials that are most appropriate to the desired ends
- design of work spaces to minimise or eliminate chemical, ergonomic and physical hazards

Scope of sustainability requirements may include:

- an integrated approach to sustainability which includes environmental, economic and social aspects or a narrower approach which focuses on each aspect individually
- parts of the enterprise to which sustainability is to apply, including whether the focus is on the

RANGE STATEMENT

whole enterprise, one work site, one work area, or a number of work sites or work areas

- an investigation of the particular business and market context of the industry or enterprise
- addressing sustainability initiatives through reference to standards, guidelines and approaches, such as:
 - federal government standards, including five-star rating for all new homes
 - ecological footprinting
 - Energy Efficiency Opportunities Bill
 - Global Report Initiative
 - Green Office Program
 - green purchasing
 - greenhouse challenge
 - environmental management systems
 - life cycle analyses
 - product stewardship
 - supply chain management
 - sustainability covenants/compacts
 - triple bottom line reporting
 - Australian Forest Certification Scheme (AFCS)
 - Forest Stewardship Council (FSC)

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Resource requirements may include:

- people
- materials
- equipment

Processes may include:

- communication
- monitoring
- reporting
- feedback
- evaluation
- ongoing review

Stakeholders may include:

- individuals and groups both inside and outside the organisation who have some direct interest

RANGE STATEMENT

in the organisation's conduct, actions, products and services, including:

- customers
- employees at all levels of the organisation
- government
- investors
- key personnel within the organisation and specialists outside it who may have particular technical expertise
- local community
- other organisations
- regulators
- suppliers

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT5208B Build and maintain community relationships

Modification History

Version	Comments
Version 1.1	Released with FPI11 Training Package Version 2. Minor amendment to application. Equivalent to FPICOT5208A Build and maintain community relationships.
Version 1	First released with FPI11 Training Package Version 1.

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to build and maintain community relationships. It includes setting parameters for relationships/partnerships, providing information relating to community engagement, and building community engagement capacity.

Application of the Unit

Application of the unit

The unit involves building and maintaining community relationships in a variety of work settings, including:

- forest environment (native and plantation)
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- forest products production
- forest sales and service
- horticulture environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job

and authority

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication.

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| <p>1. Set parameters for community relationships or partnerships</p> | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to building and maintaining community relationships are identified and followed</p> <p>1.2. <i>Contextual framework</i> is developed to assist in analysing and setting parameters for <i>relationships or partnerships</i> in line with organisational policy and procedures</p> <p>1.3. Parameters and purpose for the relationships or partnerships are established and agreed</p> <p>1.4. Benefits and <i>constraints</i> for both parties are recognised and agreed in line with organisational policy and</p> |
|--|---|

ELEMENT	PERFORMANCE CRITERIA
2. Provide information relating to community engagement	<p>procedures</p> <p>1.5. Dynamics within and across relationships or partnerships are managed</p> <p>1.6. Resources are allocated in line with organisational requirements</p> <p>2.1. Current community understandings of the organisation are assessed</p> <p>2.2. Rights and responsibilities of individuals and communities to be involved in organisational processes and decision making are communicated using language and material to suit the audience and occasion</p> <p>2.3. Opportunities for community involvement in organisational processes and decision making are communicated in ways suited to the diversity of the community</p>
3. Build community engagement capacity	<p>3.1. Skill and knowledge requirements of individuals and communities to engage with an organisation are developed using a range of strategies appropriate to individual and community needs</p> <p>3.2. Opportunities for individuals and communities to develop their capacity to engage with an organisation are identified collaboratively</p> <p>3.3. Informal and formal community networks are tapped into to strengthen local capital and to ensure ongoing capacity</p> <p>3.4. Barriers to community engagement are identified and solutions formulated and implemented in line with organisational policy, procedures and community context</p> <p>3.5. Mechanisms for communities to raise their own issues with an organisation are implemented in line with organisational policy, procedures and community context</p> <p>3.6. Strategies to build community capacity are resourced and promoted in line with organisational policy and procedures</p>
4. Document and report on community relationships or partnerships	<p>4.1. Outcomes of community relationships or partnerships are reported to relevant stakeholders</p> <p>4.2. Feedback on how the outcomes have informed planning or decision making is provided to all participants</p> <p>4.3. Community engagement capacity is reviewed in light of outcomes</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to apply workplace safety procedures to building and maintaining community relationships
- Communication skills and interpersonal techniques sufficient to interact appropriately with a variety of community partners to explain complex and formal policies; establish and foster transparent, trusting relationships or partnerships with individuals and communities; work with diverse communities using a range of communication styles to suit different audiences and purposes
- Literacy skills sufficient to detail requirements; write recommendations and prepare community engagement reports requiring complex language structures and precision of expression; prepare community engagement information requiring the presentation of complex information, using simple language structures and precision of expression
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to mediate, negotiate and attempt to obtain consensus between parties; apply lateral thinking to provide solutions and overcome barriers to community engagement
- Planning and organising skills sufficient to facilitate community engagement, including relationship building, networking, negotiation, conflict management and risk management; maintain multiple and potentially conflicting relationships or partnerships

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for building and maintaining community relationships
- Organisational requirements, policies and procedures for building and maintaining community relationships
- Community engagement theory, principles, practices and techniques
- Community development principles and practices
- Leadership principles and the management of expectations in the context of community engagement
- Local factors affecting community development and consultation processes
- Strategies for community consultation
- Processes of individual advocacy and group advocacy
- Cultural awareness
- Characteristics contributing to community diversity
- Organisational policies related to communication and the media
- Workplace safety procedures relating to community engagement activities
- Established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- Problem identification and resolution strategies
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can build and maintain community relationships

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy all the requirements of, the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to building and maintaining community relationships
- following organisational policies and procedures relevant to building and maintaining community relationships
- planning a consultation strategy to build and maintain community relationships
- developing and practising key consultation skills to engage the community
- implementing strategies to build the capacity of the community
- engaging the community in the decision making process by informing, involving and consulting
- capturing community input on forest, wood, paper and timber industry issues
- building and maintaining community relationships in a range of contexts
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Context of and specific resources for assessment

EVIDENCE GUIDE

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
 - community information, case studies or scenarios, including current journals and international case studies
 - community engagement theory, principles, practices and techniques
 - procedures and protocols for community engagement, including OHS
 - policy and legislation related to community engagement

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate

EVIDENCE GUIDE

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification

RANGE STATEMENT

requirements and codes of practice and may include:

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Contextual framework** may include:
- dynamics of community
 - community power structures
 - big politics versus community politics (big 'P' v little 'p')
 - collaborations
 - networks
 - formal or informal partnerships
 - timelines for relationship building
 - purpose of relationship or partnership building and therefore type of relationship or partnership to be developed
 - level of agency support
- Relationships or partnerships** may
- individuals
 - community groups

RANGE STATEMENT

be with:

- ethnic communities
- local residents, through place-based initiatives
- non-government organisations
- private sector organisations
- public sector agencies
- media organisations
- business community

Constraints may include:

lack of or limited:

- knowledge
- understanding
- decision-making powers
- time and resources

and may also include:

- geographic location
- previous experience with engagement processes
- community angst or lack of trust
- organisational capacity to respond to community
- external factors, including non-negotiable factors
- perceived status of organisation in the community
- community expectations of the relationship or partnership
- cost of the community to be involved, such as transport, time off work, and childcare

Resources may include:

- people
- materials
- equipment

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- negotiation
- team building
- stakeholder engagement
- internal and external
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Opportunities for community

- 'whole of community' projects as part of

RANGE STATEMENT

involvement may include:

organisation or site-based strategies

- policy development
- program or service delivery planning or decision making
- review or evaluation of existing policies, programs or services

involvement through:

- community-based information
- consultations
- direct participation
- employment of local community members
- focus groups
- information flows
- media campaigns
- one-on-one meetings
- participations in local events
- public meetings and forums
- response to questionnaires
- scenario planning
- think tanks
- visioning
- workshops

Diversity may include differences in:

- age
- cultural background
- educational level
- English language proficiency
- ethnicity
- expertise
- family responsibilities
- gender
- household structure (couple, singles, single parents, same sex partners, children)
- interests
- interpersonal approach
- language
- length of residence
- life experience
- marital status
- mobility
- physical ability

RANGE STATEMENT

- political orientation
 - religious belief
 - sexual orientation
 - socioeconomic background
 - thinking and learning styles
 - work experience
- Opportunities for individuals and communities to develop their capacity** may include:
- access to resources and information to build knowledge
 - community visioning
 - community development
 - attendance at workshops
 - participation opportunities
 - formal learning opportunities
 - community building networks
 - formal and informal:
 - leadership programs
 - mentoring and coaching programs
- Informal and formal community networks** may include:
- interest groups
 - clubs
 - associations
 - leadership structures
 - community leaders and elders (place-based)
 - word-of-mouth
 - web-based information networks
 - electronic communication
 - virtual learning communities
 - reference groups
 - church groups
 - service clubs
 - existing multi-agency reference groups
 - school networks
 - community organisations
 - community services
 - non-government organisations
 - religious and cultural networks
- Barriers to community engagement** may include:
- access constraints
 - community perception that nothing ever comes from engagement with organisations
 - cultural barriers
 - diversity variables

RANGE STATEMENT

- geographical isolation
- inappropriate timing, venues and strategies
- lack of awareness of the full range of organisational products or services
- lack of clear branding in organisational communications
- language issues
- little access to effective information in first language
- little access to traditional ethnic media channels, such as print, radio or an integrated mix
- mobility issues
- over-reliance on or sole use of electronic media and internet
- poor integration of information strategies
- poor monitoring and feedback loops
- poor past experience with engagement processes
- previous over-consultation
- social capital gate keepers - residents who lock broad participation
- socioeconomic levels
- terminology and style of copy used in organisational information
- time constraints
- unequal access to information, participation and influence on decision making
- lack of confidence or trust in the organisation
- lack of or limited:
 - follow-up within community engagement strategies
 - information at the local level through resources such as community newspapers
 - interest in or commitment to the issues
 - openness and transparency
 - understanding or clarity about the engagement process
 - access to effective information in first language
- local solutions to a range of local issues
- new or improved services or products
- infrastructure
- strategic planning

Issues may include:

RANGE STATEMENT

- community development

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT5209B Manage tree harvesting to minimise environmental impact

Modification History

Version	Comments
Version 1.1	Released with FPI11 Training Package Version 2. Minor amendment to application. Equivalent to FPICOT5209A Manage tree harvesting to minimise environmental impact.
Version 1	First released with FPI11 Training Package Version 1.

Unit Descriptor

Unit descriptor

This unit specifies the outcomes required to plan and manage tree harvesting to minimise environmental impact and by-product while maximising yields using harvest planning systems.

Application of the Unit

Application of the unit

The unit involves managing tree harvesting to minimise environmental impact in a variety of settings, including:

- forest environment (native and plantation)
- agroforestry
- farm forestry.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit. Subject to enterprise requirements specific licences/certification may be required in the following areas:

- Forest Sustainability Certification
- Chain of Custody Certification
-

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop tree harvesting plan	1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to managing tree harvesting while minimising environmental impact are identified and followed 1.2. Tree harvesting requirements are researched and analysed 1.3. Consultation processes are undertaken as an integral part of the planning process 1.4. Available timber is identified and calculated 1.5. <i>Tree harvesting plan</i> is developed to ensure

ELEMENT	PERFORMANCE CRITERIA
2. Initiate pre-harvesting activities	<p>maximum yields while minimising environmental impact and by-product</p> <p>1.6. Approval for plan is gained and work teams are informed</p> <p>2.1. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with the manufacturer's specifications and OHS requirements</p> <p>2.2. Buffer zones, protected areas and erosion control measures are installed or identified</p> <p>2.3. Resources are acquired in line with plan requirements, and equipment and resource requirements estimated</p> <p>2.4. Planning permits and access permission are applied for and gained</p> <p>2.5. Communication with stakeholders is established and maintained in line with OHS, environmental and organisational requirements</p>
3. Manage tree harvesting operations	<p>3.1. Harvesting operational activities are managed for compliance with environmental and organisational requirements</p> <p>3.2. Sustainability indicators are monitored for compliance with sustainability plan</p> <p>3.3. Reported exceptions to work order and tree harvesting plan are rectified within legislative and planned timeframes</p>
4. Review tree harvesting operations	<p>4.1. Sustainability indicators are reported for all harvesting stages, including pre- and post-harvesting, in line with organisational and contractual requirements</p> <p>4.2. Performance indicators are reported to appropriate stakeholders in line with legislative and contractual requirements</p> <p>4.3. Sufficient feedback is reported to provide data for assistance with planning of future harvesting</p>
5. Review tree harvesting plan	<p>5.1. Data from tree harvesting operations is analysed to assist with planning future harvesting operations</p> <p>5.2. Techniques to review effectiveness of harvesting operations in maximising yields and minimising environmental impact and by-product are implemented</p> <p>5.3. Information is used to change harvesting plan as</p>

ELEMENT **PERFORMANCE CRITERIA**

required

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to manage tree harvesting while minimising environmental impact
- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation; read and interpret maps; follow legislation, regulations, standards, codes of practice and safe working procedures involved in harvesting operations
- Numeracy skills sufficient to estimate and calculate volume, gross and net areas; calculate available timber
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures
- Planning and organisational skills sufficient to organise and obtain required permits and to manage harvesting operation while minimising environmental impact; prepare and review a tree harvesting plan; implement a tree harvesting plan
- Managerial skills sufficient to manage harvesting operations
- Research skills sufficient to obtain information on tree harvesting requirements to maximise yields and minimise environmental impact and by-product

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing tree harvesting to minimise environmental impact
- Environmental protection requirements, including the safe disposal of waste material
- Organisational, site and management standards, requirements, policies and processes for implementing harvesting plans
- Environmental risks and hazards
- OHS in relation to harvesting operations
- OHS monitoring systems
- Applicable certification schemes such as Forest Stewardship Council, Australian Forestry Standard, ISO standards for environmental and other management

REQUIRED SKILLS AND KNOWLEDGE

- systems, other identified industry standards
- Chain of custody principles and applicable systems
- Database management and document control systems
- Mathematic theory and application for calculating volume and scheduling flow
- Tree harvesting plans
- Sustainability indicators
- Coupe size (gross area estimate, net area estimate and volume estimate)
- Buffer zones, protected areas and erosion control
- Planning permits and access permission
- Performance indicators
- Established communication channels and protocols
- Problem identification and resolution
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for the recording, reporting and maintenance of workplace information
-
-

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently manage tree harvesting in line with organisational requirements while minimising environmental impact

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including, environmental, OHS and organisational policies and procedures relevant to managing tree harvesting
- following organisational policies and procedures relevant to managing tree harvesting to minimise environmental impact

EVIDENCE GUIDE

- Context of and specific resources for assessment
- using harvest planning systems to develop and review a tree harvesting plan
 - managing harvesting operations in line with the tree harvesting plan
 - rectifying exceptions to work order and environmental plans
 - using data and performance indicators to review harvesting operations
 - Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of

EVIDENCE GUIDE

other units of competency

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures

Environmental requirements

RANGE STATEMENT

may include:

- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements

may include:

- legal
- organisational and site guidelines
- fire management principles
- waste management principles
- wet weather controls
- soil erosion control
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Tree harvesting plan may include:

- sustainability indicators
- sustainability plan
- OHS monitoring systems
- applicable certification schemes

RANGE STATEMENT

- coupe size
 - calculation of available timber
 - key performance indicators
 - human resource requirements, equipment and resource requirement estimates
 - planning permits and access permission requirements
 - staff and contract work orders
 - permits granted by:
 - government
 - local authority
 - other entitled entities for access and harvesting operations to take place
- Planning permits and access permission** may include:
- Communication* may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Stakeholders** may include:
- management
 - staff
 - contractors
 - environmental authorities
 - public
 - Commonwealth, State/Territory and local government
 - product processors
 - customers
 - destination markets
- Harvesting operational activities* may include:
- surveying and mapping site details
 - marking stream buffers, filter strips, contours, gullies, roads, bridges and other watercourse crossings
 - other site preparation
 - habitat protection
 - landscape protection
 - buffer establishment

RANGE STATEMENT

- related construction
- fire management
- harvesting
- regeneration
- machinery operations
- site preparation silvicultural exercises associated with harvesting
- road work, including the construction of roads, tracks, watercourse crossings and bridges, building drains and silt traps
- waste removal
- chipping
- transportation
- wet weather activities and operation adjustments
- pest management prescriptions
- water quality
- soil condition
- appropriate native flora and fauna protection
- maintenance of any culturally significant landscapes, natural or anthropogenic formations and constructions

Sustainability indicators should include:

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical

FPICOT6201B Manage community engagement

Modification History

Version	Comments
Version 1.1	Released with FPI11 Training Package Version 2. Minor amendment to application. Equivalent to FPICOT6201A Manage community engagement.
Version 1	First released with FPI11 Training Package Version 1.

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to design and implement strategies that involve the community in decision making. It includes analysing, scoping, designing, implementing, reporting and evaluating on community engagement activities.

Application of the Unit

Application of the unit

The unit involves managing community engagement in a variety of work settings, including:

- forest environment (native and plantation)
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- forest products production
- forest sales and service
- horticultural

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication.

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| <p>1. Scope the need for community engagement</p> | <p>1.1.Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to managing community engagement are identified and followed</p> <p>1.2.Benefits for community involvement in the engagement process are evaluated for the organisation and for the community</p> <p>1.3.Framework is designed to assist in analysing issues that require community engagement</p> <p>1.4.<i>Key stakeholders</i> are identified and consulted in line with organisational policy and procedures</p> <p>1.5.Target community is defined in line with the purpose, objectives and <i>issues</i></p> <p>1.6.Range of <i>community engagement strategies</i> are</p> |
|---|--|

ELEMENT	PERFORMANCE CRITERIA
2. Develop community engagement plan	<p>assessed for suitability in engaging the community in the issues</p> <p>2.1.Purpose and objectives of community engagement are established in consultation with key stakeholders</p> <p>2.2.Community engagement strategies are designed that are relevant, achievable, measurable and flexible enough to allow for the emergence of new ideas and options</p> <p>2.3.Likely <i>barriers to community involvement</i> are explored and strategies to address them are developed</p> <p>2.4.Relevant commitment to/approval of the community engagement plan is obtained in line with organisational policy and procedures</p> <p>2.5.<i>Community diversity</i> is acknowledged and respected throughout the development of the plan</p> <p>2.6.Communication, monitoring, reporting, feedback and evaluation processes are embedded in the plan</p>
3. Implement community engagement plan	<p>3.1.<i>Resources</i> and time are allocated to the implementation of the plan</p> <p>3.2.Implementation is managed in line with the plan design</p> <p>3.3.Objectives and constraints of the engagement are <i>communicated</i> to designated personnel</p> <p>3.4.Clarity is established around the roles and responsibilities of all participants</p> <p>3.5.Expectations of participants are identified and managed, and the community is provided with relevant information throughout the engagement process</p> <p>3.6.Plan is implemented flexibly enough to allow the community to raise new ideas or options</p> <p>3.7.Community is provided with opportunities to develop its <i>engagement capacity</i> and barriers to involvement are addressed</p> <p>3.8.Feedback mechanisms are implemented in line with the plan and community requirements are addressed to maximise participation</p>
4. Evaluate community engagement plan	<p>4.1.All components of the community plan are evaluated in line with the plan's purpose and objectives</p> <p>4.2.Feedback on the quality of the strategies used is</p>

ELEMENT	PERFORMANCE CRITERIA
5. Report on the outcomes of community engagement	<p>obtained from relevant personnel and stakeholders</p> <p>4.3.Outcomes from the engagement are recorded, shared and used across the organisation and with the community, in line with organisational policy and procedures</p> <p>5.1.Outcomes of community engagement are reported to relevant stakeholders</p> <p>5.2.Feedback on how outcomes may inform current and future planning or decision making is provided to all participants</p> <p>5.3.Community engagement plan is reviewed in light of outcomes</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to apply workplace safety procedures to community engagement strategies; evaluate community engagement strategies
- Communication skills sufficient to use a range of communication styles to suit different audiences and purposes; explain complex and formal policies and concepts to a variety of audiences
- Literacy skills sufficient to detail requirements; write recommendations and prepare community engagement reports requiring complex language structures and precision of expression
- Problem solving skills sufficient to mediate, negotiate and attempt to obtain consensus between parties; apply lateral thinking to provide solutions and overcome barriers to community engagement
- Planning and organisational skills sufficient to develop policies and procedures; manage expectations; scope, design and implement community engagement plans, including project, time and budget management; facilitate community engagement, including relationship building, networking, negotiation, conflict management and risk management

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, policies, standards, codes of practice and established safe practices relevant to the full range of processes for developing and implementing community engagement strategies
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

material

- Organisational and site standards, requirements, policies and procedures for developing and implementing community engagement strategies
- Community engagement theory, principles and techniques
- Facilitation/process management in the context of community engagement
- Principles of working within an ethical framework
- Community consultation and decision-making processes
- Power structures and relationships in the community
- Processes of both individual advocacy and group advocacy
- Models of negotiation
- Complex cultural awareness
- Community development principles
- Diversity in the community
- National and state or territory reporting requirements in relation to community engagement
- Social justice principles
- Organisational policies related to communication and the media
- Workplace safety procedures relating to community engagement strategies
- Established communication channels and protocols
- Problem identification and resolution strategies
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can manage community engagement

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing community

EVIDENCE GUIDE

engagement

- following organisational policies and procedures relevant to managing community engagement
- planning, designing and implementing community engagement strategies that follow legislative requirements
- documenting an implementation strategy for community engagement, as part of a plan, that has been designed, implemented and reviewed, showing a measurable outcome using the chosen indicators
- communicating with stakeholders to discuss possible approaches to community engagement
- reviewing and improving strategies by identifying improvements and benchmarking against plan objectives

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
 - community information, case studies or scenarios, including current journals and international case studies
 - community engagement theory, principles, practices and techniques
 - procedures and protocols for community engagement, including OHS
 - policy and legislation related to community engagement

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and

RANGE STATEMENT

may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice such as:
 - chain of custody (COC)
 - Programme for the Endorsement of Forest Certification (PEFC) schemes
 - Forest Stewardship Council (FSC)
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

Organisational requirements may include:

RANGE STATEMENT

- quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Key stakeholders** may include:
- all those who may be directly affected or may have a significant issue in the engagement process, including:
 - individuals
 - local residents
 - community leaders
 - community groups
 - ethnic communities
 - non-government organisations
 - public sector officers
 - private sector organisations/business community
 - public sector agencies
 - elected public officials who may need to be briefed or provide approval throughout the process
 - public land committees of management
- Community engagement strategies** may include:
- alliances
 - partnerships
 - education and awareness campaigns
 - on-line consultation and interaction
 - deliberative processes
 - public meetings
 - consultation with stakeholders
 - media campaigns
 - community-based information
 - direct participation
 - scenario planning
 - advisory bodies and steering committees
 - events
 - celebrations

RANGE STATEMENT

- launches
 - awareness activities or programs
 - public forums
 - workshops
 - face-to-face meetings and interviews
 - focus groups
 - questionnaires (email, internet or hard copy)
 - surveys
 - negotiation tables
 - formal partnerships
 - telephone interviews
 - written submissions
- Barriers to community involvement** may include:
- access constraints
 - mobility issues
 - poor past experiences with engagement processes
 - time constraints
 - previous over-consultation
 - geographical isolation
 - socioeconomic levels
 - diversity variables
 - social capital gate keepers - residents who block broad participation
 - lack of or limited:
 - interest in or commitment to the issue
 - understanding about the actual issue
 - understanding or clarity about the engagement process
- Community diversity** may include difference in:
- age
 - cultural background
 - disability
 - educational level
 - English language proficiency
 - ethnicity
 - experience
 - expertise
 - family responsibilities
 - gender
 - intellectual difference
 - interests

RANGE STATEMENT

- interpersonal approach
 - language
 - learning styles
 - length of residence
 - life experience
 - marital status
 - mobility
 - physical differences
 - politics
 - race
 - religion
 - sexual orientation
 - socioeconomic background
 - thinking styles
 - work experiences
 - working styles
- Resources** may include:
- people
 - materials
 - equipment
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - negotiation
 - team building
 - stakeholder engagement
 - internal and external
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Engagement capacity** may include:
- information - a one-way relationship in which appropriate and relevant information is disseminated to the community
 - consultation - a two-way relationship in which the views of individuals or communities on issues that affect them directly or in which they may have a significant interest, are asked for, received and taken into consideration

RANGE STATEMENT

- active participation - opportunities for individuals and communities to propose options and be involved in planning and decision making

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT6202B Develop and manage a forestry chain of custody certification process for the workplace

Modification History

Version	Comments
Version 1.1	Released with FPI11 Training Package Version 2. Reference added to specific legislation in required knowledge, and minor change to application. Equivalent to FPICOT6202A Develop and manage a Forestry Chain of Custody certification process for the workplace.
Version 1	First released with FPI11 Training Package Version 1.

Unit Descriptor

Unit descriptor This unit describes the outcomes required to develop and manage an appropriate system for chain of custody certification which will enable the organisation to fulfil its obligations and responsibilities under applicable certification requirements.

Application of the Unit

Application of the unit The unit involves developing and managing a process for forestry chain of custody certification in a variety of work settings including:

- forest environment (native and plantation)
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- timber and wood products production
- timber and wood products sales and service
- other applicable settings such as farms, agriculture,

workshops, domestic, nursery, local council applications

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit. Specific requirements apply to OHS and environmental requirements and are referred to in Australian Standard (AS) 47072006 Chain of custody for certified wood and forest products.

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Review applicable certification

1.1. Applicable ***Occupational Health and Safety (OHS), legislative, environmental and organisational requirements*** relevant to managing a process for

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| requirements | forestry chain of custody certification are identified and followed |
| 2. Develop a chain of custody certification management system | <ul style="list-style-type: none">1.2.Chain of custody <i>certification requirements</i> and <i>forestry certification systems</i> are reviewed and certification requirements interpreted to ensure compatibility between the systems1.3.Document <i>traceability chain</i> is interpreted for certification requirements applicable to the organisation2.1.Each area and operation applicable to certification management is investigated to determine options for a certification management system that is consistent with legislative requirements2.2.Components for the effective and efficient operation of the proposed certification management system are investigated2.3.Potential internal certification system auditors are identified and suitable training options selected and implemented2.4.Strategies for developing a chain of custody certification management culture in the organisation are developed in collaboration with relevant internal and external personnel2.5.Induction process for all staff is developed and implemented in collaboration with relevant internal and external personnel2.6.Processes and procedures for identifying and managing breaches are identified and documented2.7.Reporting requirements are determined and suitable processes and procedures developed to meet requirements2.8.Resources to ensure implementation are budgeted and assigned2.9.Chain of custody certification plan is developed and approval for the plan sought from management |
| 3. Document chain of custody certification management system | <ul style="list-style-type: none">3.1.Specifications for the various components of the chain of custody certification management system are documented in line with organisational and legislative requirements3.2.Action schedule for implementing, reviewing and maintaining the system is documented3.3.External certification entities with the necessary authority to issue chain of custody certification to the |

ELEMENT

PERFORMANCE CRITERIA

- relevant Australian Standard are contacted to review the system
- 3.4. *Values statement* is written in consultation with management that covers the necessary elements of the chain of custody certification management system
4. Establish the planned chain of custody certification management system
- 4.1. Management and operations personnel are trained before they assume certification management responsibilities
- 4.2. Components of the certification system are established in collaboration with assigned staff
- 4.3. Operation of the certification system is monitored in collaboration with assigned staff in line with the approved plan
- 4.4. Periodic reviews of the certification system are conducted in collaboration with assigned staff in line with the approved plan
- 4.5. Reports are prepared on the operation and review of the certification system in line with established procedures and regulatory and compliance obligations

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to relate how the requirements of AS 47072006 Chain of custody for certified wood and forest products apply to an organisation
- Communication skills sufficient to explain AS 47072006 Chain of custody for certified wood and forest products and its requirements to all personnel within the workforce; conduct periodic reviews of the chain of custody certification management system
- Literacy skills sufficient to write a values statement and systems manual for the chain of custody certification process and subsequent documentation; prepare reports for management on the review of the chain of custody certification management system
- Numeracy skills sufficient to prepare a budget for the implementation of the chain of custody certification management system

REQUIRED SKILLS AND KNOWLEDGE

- Problem solving skills sufficient to apply the requirements of AS 47072006 Chain of custody for certified wood and forest products to a specific workplace/s

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice and established safe practices relevant to the full range of processes for developing forestry chain of custody certification management system, including the Illegal Logging Prohibition Act 2012 and related or superseding legislation
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for developing and managing a process for forestry chain of custody certification
- Environmental risks and hazards
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- All stages of the work flow and its likely impact on a chain of custody process
- Principles of auditing to a standard
- AS 47072006 Chain of custody for certified wood and forest products
- Continuous improvement processes and systems
- How a chain of custody process fits into forestry certification systems
- How the chain of custody process and a traceability chain operates in the workplace to meet the requirements of the appropriate standard
- Established communication channels and protocols
- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for budgeting and calculating rolling percentage averages
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can develop and

EVIDENCE GUIDE

manage a process for chain of custody certification for their workplace to meet AS 47072006 Chain of custody for certified wood and forest products

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to developing and managing a process for forestry chain of custody certification
 - following organisational policies and procedures relevant to developing and managing a process for forestry chain of custody certification
 - comprehensive understanding of AS 47072006 Chain of custody for certified wood and forest products and the requirements for developing and managing a process for chain of custody certification in the workplace that meets the requirements of this standard
 - planning for and setting up a chain of custody certification management system for an actual workplace or simulated workplace in collaboration with relevant personnel
 - preparing documentation for a chain of custody certification management system
 - writing a values statement in consultation with relevant personnel covering the necessary elements of the chain of custody certification management system
 - monitoring and reviewing a chain of custody certification management system in collaboration with relevant personnel
 - preparing reports for management on the chain of custody certification management system
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Context of and specific resources for assessment

EVIDENCE GUIDE

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
 - access to relevant information on chain of custody certification requirements

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Environmental requirements

may include:

- legislation
- organisational policies and procedures
- workplace practices

RANGE STATEMENT

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Certification requirements may include:

- internal and external authorities
- risks involved
- ways of ensuring compliance
- penalties for non-compliance
- areas and operations most affected

Forestry certification systems must include:

- Australian Forestry Standard
- Forestry Stewardship Council

Traceability chain

- is a register of documents used for certification, audit and quality purposes

and may include:

- timber source documents
- processing records
- quality records
- numbering/labelling systems

Values statement

is a summary of the organisation's values in relation to forest and forest product certification

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT6203A Develop engineered timber products to meet energy efficient building

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to research and develop engineered timber products to meet the requirements of energy efficient design within residential buildings. It requires thorough knowledge of residential building design and building codes, and high level knowledge of engineered timber design and practice

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves the development of engineered timber products in a timber and wood products production setting at a senior project management or senior design level

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| <p>1. Explore commercial opportunities for engineered timber products</p> | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to developing engineered timber products to meet energy efficient building design needs are identified and followed</p> <p>1.2. <i>Building Codes of Australia</i> (BCA) guidelines and <i>standards</i> relating to <i>climate zones</i> and <i>energy efficiency measures</i> are reviewed</p> <p>1.3. Existing <i>information</i> that informs new product development is researched and evaluated</p> <p>1.4. Gaps in current range of <i>engineered timber products</i> are identified and used as a catalyst for generating new products or <i>concepts</i></p> <p>1.5. <i>Market analysis</i> is undertaken using appropriate information sources to determine design and production requirements</p> <p>1.6. Preliminary ideas on product/s are developed</p> <p>1.7. Consultation with relevant <i>stakeholders</i> is undertaken to agree on broad parameters for developing product/s to meet market needs</p> |
| <p>2. Formulate and test design concept for product/s</p> | <p>2.1. Ideas/styles that complement design and production requirements are conceived and developed</p> <p>2.2. Design concepts are communicated using</p> |

ELEMENT

PERFORMANCE CRITERIA

- appropriate *documentation methods* to produce preliminary representation of the product/s
- 2.3. Design concepts are critiqued and reviewed with stakeholders
- 2.4. Design concepts are reviewed to ensure energy efficiency is proven to sufficient level to progress project
- 2.5. *Business case* that includes a full cost benefit analysis and an appropriate risk assessment is undertaken
- 2.6. *Approval is sought for the project from all relevant stakeholders*
3. Develop the product
- 3.1. *Product development* is undertaken in line with design and production requirements
- 3.2. Product development outcomes and energy efficiency are reviewed and aligned with market analysis and organisational priorities
- 3.3. *Certification* processes and compliance of the engineered product and production system are initiated and/or achieved
- 3.4. Detailed implementation *specifications* are developed and presented to relevant stakeholders for approval and funding
4. Develop product concept to an operational level
- 4.1. Organisational procedures for product development and marketing product are followed
- 4.2. Production resources are selected and organised in line with design and production requirements
- 4.3. *Quality assurance* system is designed
- 4.4. Safe operating procedures for handling and operating of plant, tools and process involved in production are developed and documented

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to develop engineered timber products; use and

REQUIRED SKILLS AND KNOWLEDGE

understand house energy rating software; use quality management systems; undertake risk analysis; undertake material analysis in relation to wood and associated products used in manufacturing of composites and engineered products; determine thermal capacity of materials and generate an R-value for products; apply principles of energy efficient design to building and developing building products

- Communication skills sufficient to use appropriate communication and interpersonal techniques with stakeholders, colleagues and others; utilise technical and theoretical concepts in operational applications
- Literacy skills sufficient to interpret legislation, standards and codes of practice; document control records; undertake market research and analysis

Project management skills in relation to engineering, product development, manufacturing and marketing operations

- Problem solving skills sufficient to identify problems and faults; demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for developing engineered timber products to meet energy efficient building design needs
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for developing engineered timber products to meet energy efficient building design needs
- Environmental risks and hazards
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Theory underpinning the development of R-values
- Standards associated with timber products
- Standards and certification schemes and chain of custody systems relating to forest products
- Timber engineering design applied to residential constructions and the application of energy use efficiency
- Timber species characteristics as they relate to engineering design and serviceability
- Other materials involved in composite products and their characteristics in relation to engineering design and serviceability
- Processes involved in developing, manufacturing and supplying wood products used in residential buildings
- House energy rating software and associated protocols for use

REQUIRED SKILLS AND KNOWLEDGE

- Project management tools
- Quality management systems
- Risk assessment systems
- Cost benefit analysis tools, including discounting
- Market issues relating to products, zones and applications
- Established communication channels and protocols including notification of authorities
- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures associated with structural engineering and wood products
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently research and develop engineered timber products

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to developing engineered timber products
- following organisational policies and procedures relevant to engineered timber products
- developing engineered timber products to production stage
- identifying commercial opportunities for engineered timber products
- formulating and designing concepts for engineered

EVIDENCE GUIDE

- timber products
- Context of and specific resources for assessment**
- developing and exploiting engineered timber products
 - Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI1 training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- use of tools and plant appropriate to a task and used to safe working procedures
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements may include:

Building Codes of Australia must include:

codes relevant to:

- sustainability
- climate zones
- thermal rating
- durability
- fire safety
- span tables

Standards may include:

- BCA
- all AS/NZ Standards associated with engineered wood products and associated design and construction
- industry practices for operating
- Forest Certification and Chain of Custody

RANGE STATEMENT

Standards

- material handling
- environmental monitoring and waste management
- engineering design parameters
- other serviceability minimum requirements in relation to durability and in serviceability of wood based products

Climate zones

are based on climate characteristics and local authority borders, and may include:

- any of zones 1-8

Energy efficiency measures may include:

- lifecycle factors
- thermal characteristics

Information may include:

- discussions with industry practitioners
- electronic/print media
- industry events
- government bodies and associated publications
- industry associations
- internet
- libraries and archives
- lifestyle and contemporary issues magazines
- museums/galleries/studios
- journals
- personal observations and experience
- retail/wholesale suppliers of products and services
- technical publications/reference books
- training programs/seminars and professional development activities

Engineered timber products may include:

- laminated beams
- laminated veneer lumber (LVL)
- plywood
- chipboard
- hardboard
- medium density fibre board (MDF)
- oriented strand board (OSB)
- laminated or engineered flooring

Concept may include:

- an abstract idea
- patent
- existing product

RANGE STATEMENT

Market analysis should include: identification of:

- need
- placement
- financial certainty
- volume

Stakeholders may include:

- clients
- commissioning body/organisation
- competitors
- design team
- management staff
- manufacturers
- material importers and suppliers
- mentors
- peers
- production staff
- sales staff
- suppliers
- target market

Documentation methods may include:

- diagrams
- drawings or sketches
- electronic presentations
- illustrations
- layouts
- mock-ups
- models
- plans
- prototypes
- samples
- verbal presentations
- written notes

Business case must include:

a review of all associated costs such as:

- capital cost
- material
- labour
- design expenses
- overheads
- margin
- running cost
- lifecycle analysis

RANGE STATEMENT

- Product development** may include:
- market uptake
 - discount and internal rate of return on investment
 - other opportunity cost analysis
 - prototyping
 - testing
 - acquiring/commencing certification
 - gaining approval for developing infrastructure
 - developing plant and infrastructure
 - establishing methods and procedures
- Certification** may include:
- all AS/NZ Standards associated with engineered wood products and associated design and construction
 - industry practices for operating
 - Forest Certification and Chain of Custody Standards
 - environmental monitoring and waste management
- Specifications** may include:
- purpose
 - audience
 - budget
 - resources - human, plant and equipment
 - ownership of final product
 - operational plan
- Quality assurance** involves benchmarks and standards which may be set by:
- BCA
 - AS/NZ Standards
 - organisational and market criteria
 - federal, State or Territory and council legislation
- and may use:
- forms completed by operators and supervisors
 - digital or remote methods of monitoring and reporting

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT6204A Use carbon accounting to estimate emissions in the workplace

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to account the carbon emissions released over a defined period of time for a forestry-related organisation

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves the identification and application of carbon accounting methodologies to develop and analyse a carbon inventory for the workplace. The unit can be applied in a variety of work settings including:

- forest environment
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- forest products factory
- forest products sales and service
- horticultural, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Evaluate the context for instigating carbon accounting in the workplace | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to carbon accounting are identified and followed</p> <p>1.2. Need to quantify the stocks, sources and sinks of carbon and other greenhouse gas (GHG) emissions in the context of anthropogenic impacts on the global climate is examined</p> <p>1.3. Mandatory and voluntary obligations for carbon accounting under <i>international conventions and protocols</i> and national context are investigated</p> <p>1.4. <i>Supplementary principles</i> of carbon accounting are examined</p> <p>1.5. Role of the forestry sector in the global balance of GHG emissions is assessed</p> |
|--|---|

ELEMENT	PERFORMANCE CRITERIA
2. Identify carbon accounting methodologies and define the appropriate approach	<p>1.6. <i>Objective</i> of conducting an accounting of carbon emissions is established</p> <p>2.1. Methodologies for carbon accounting are explored</p> <p>2.2. Carbon accounting frameworks and methods are examined</p> <p>2.3. Protocols for carbon <i>biomass pools</i> including harvested wood products and <i>non CO₂ emissions</i> are identified</p> <p>2.4. Approach for developing a carbon inventory in line with the nationally agreed standards is established</p>
3. Establish the accounting area	<p>3.1. Organisational and operational <i>boundary/ies</i> for the carbon inventory are defined</p> <p>3.2. Time period over which carbon emissions are to be assessed is determined</p>
4. Collect data	<p>4.1. <i>Emissions and offset sources</i> are identified</p> <p>4.2. Collection of activity/consumption and offset data is determined based on availability of data, analytical capacity and available resources</p> <p>4.3. Carbon inventory summary table is constructed listing and separating the emission sources into the correct scopes</p> <p>4.4. Carbon offset sources are included in the carbon inventory summary table outside the scopes</p> <p>4.5. Available data is recorded in separate spreadsheet tabs</p> <p>4.6. Existing <i>secondary data</i> is researched</p> <p>4.7. Field data is gathered for carbon storage sources</p>
5. Apply calculation methodology	<p>5.1. Calculations for carbon dioxide equivalent emissions consistent with GHG protocol are conducted within the spreadsheets for each emissions source included in the inventory</p> <p>5.2. Calculations for carbon storage, consistent with a <i>standardised methodology</i> are conducted within the spreadsheets for each carbon offset source included in the inventory</p> <p>5.3. Carbon inventory summary is populated with calculated emissions/offsets in descending order</p> <p>5.4. Total emissions for each scope and for the removals/offsets are calculated</p> <p>5.5. Sum total of all emissions and offsets for the inventory are calculated</p>

ELEMENT**PERFORMANCE CRITERIA**

- 5.6. Change in carbon stocks is estimated if a baseline exists
- 5.7. Charts and/or graphs are prepared to display the emissions by scope and source
- 5.8. Suitable ratio indicator for the organisation is formulated and its value is calculated based on the total carbon emissions in the summary
- 5.9. Value of the ratio indicator is reported in the carbon inventory summary

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to select and apply a methodology to calculate emissions; examine carbon accounting frameworks and methods; develop a carbon inventory for the workplace
- Communication skills sufficient to gather primary data from field surveys; use appropriate communication and interpersonal techniques with stakeholders, colleagues and others
- Literacy skills sufficient to interpret legislation, standards and codes of practice; document control records; research relevant information to collect secondary data; record data in separate spreadsheet tabs
- Numeracy skills sufficient to collect and analyse data; calculate emissions using an equation; conduct carbon storage calculations; prepare charts and graphs
- Problem solving skills sufficient to estimate total uncertainty

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for carbon accounting
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions
- Organisational and site standards, requirements, policies and procedures for carbon accounting
- Environmental risks and hazards
- Minimising environmental impact
- Using energy effectively and efficiently

REQUIRED SKILLS AND KNOWLEDGE

- Using material effectively and efficiently
- International and national GHG emission standards, guidance and frameworks, such as:
 - GHG protocol
 - ISO 14064-1 2006 Greenhouse gases -- Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
 - National Greenhouse Accounts (NGA) Factors Workbook
- Carbon cycle
- Influences on the carbon cycle
- Anthropogenic influences
- Greenhouse effect
- Trends in carbon emissions
- Impacts of climate change
- Drivers behind carbon accounting
- Carbon accounting terminology
- Carbon accounting frameworks and methods
- Organisational and operational boundaries
- Categorising carbon reductions, removals offsets
- Emissions sources in the workplace
- Collecting data
- Selecting emissions factors
- Established communication channels and protocols
- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and

EVIDENCE GUIDE

efficiently use carbon accounting to estimate emissions in the workplace

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to carbon accounting
- following organisational policies and procedures relevant to carbon accounting
- researching information to establish an objective for conducting carbon accounting in the workplace
- identifying boundary/ies to be covered
- identifying emission sources to be covered
- selecting an emissions calculation approach
- collecting activity data
- applying a calculation tool to estimate emissions

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills

EVIDENCE GUIDE

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment

RANGE STATEMENT

- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

International conventions and protocols may include:

- Kyoto Protocol
- ISO 14000 essentials

RANGE STATEMENT

- GHG protocol
 - Copenhagen Agreement
- Supplementary principles** may include:
- baseline scenario
 - leakage
 - permanence
- Objectives** may include
- providing information on which to build an effective strategy to manage GHG emissions
 - prerequisite for participating in GHG trading markets
 - demonstrating compliance with government regulations
- Biomass pools** may include:
- above ground biomass
 - below ground biomass
 - dead organic matter - wood, litter
 - soil organic matter
- Non-CO₂ emissions** may include:
- soil disturbance
 - fertilisation
 - biomass combustion
- Boundary/ies** may include:
- global
 - national, organisational
 - operational
 - geographical
 - project based
- Emissions and offset sources** may include:
- direct GHG emissions
 - indirect GHG emissions
 - on-site and off-site emissions (geographical)
 - upstream emissions
 - downstream emissions
 - full cycle accounting
- Secondary data** may include:
- information from national statistical agencies
 - information from research institutes
 - information from sectoral experts
- Standardised methodology** may include:
- legislated carbon farming initiatives

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT6205A Prepare an enterprise carbon management report

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to write a carbon management report for an organisation in a suitable format for dissemination to internal personnel and/or external authorities

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves reviewing an enterprise carbon inventory, developing a carbon report and reviewing carbon reporting procedures in a variety of work settings including:

- forest environment
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- forest products factory
- forest products sales and service
- horticultural, local council, emergency services environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare to write report

- 1.1. Applicable *Occupational Health and Safety* (OHS), *environmental*, *legislative* and *organisational requirements* relevant to developing a carbon management report are identified and followed
- 1.2. Carbon reporting procedures as outlined in the Greenhouse Gas (GHG) Protocol Corporate Standard are reviewed
- 1.3. Scope of carbon reporting and relevant audience are determined
- 1.4. Structure and specific objectives for each heading in the report are established in line with the carbon reporting procedures and *regulatory bodies* requirements
- 1.5. Report format and style are developed in line with industry standards and organisational requirements

ELEMENT	PERFORMANCE CRITERIA
	1.6. Carbon inventory data is reviewed and assessed for completeness, relevance and accuracy 1.7. Information management system is established and maintained to manage information and data effectively and efficiently over the reporting period
2. Compile draft report	2.1. Report content is developed in line with the structure and objectives 2.2. Evidence is gathered to generate <i>specific findings and recommendations</i> that are relevant to carbon management principles 2.3. Report is written using appropriate language and contains information required to meet report objectives
3. Complete report	3.1. Draft report is presented to relevant personnel for review 3.2. Report is amended based on feedback 3.3. Final draft is presented to relevant personnel for executive sign-off and distribution 3.4. Documents are named and stored in line with organisational requirements and the application exited without information loss/damage

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Research, technical, planning and organisational skills sufficient to prepare, compile and review a carbon management report
- Technical skills sufficient to review an enterprise carbon inventory; develop a carbon report; establish and review carbon reporting procedures as outlined in the GHG Protocol Corporate Standard
- Communication skills sufficient to use appropriate communication and interpersonal techniques with stakeholders, colleagues and others
- Literacy skills sufficient to write a carbon management report for an organisation in a suitable format
- Numeracy and analytical skills sufficient to collect and analyse data; estimate and measure, including calculate time to complete tasks

REQUIRED SKILLS AND KNOWLEDGE

- Problem solving skills sufficient to identify problems; implement appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for carbon reporting
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for carbon reporting
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Carbon cycle
- Influences on the carbon cycle
- Anthropogenic influences
- Greenhouse gas effect
- Trends in carbon emissions
- Impacts of climate change
- Drivers behind carbon accounting
- Carbon accounting terminology
- Carbon accounting frameworks and methods
- Organisational and operational boundaries
- Categorising carbon reductions, removals offsets
- Emissions sources in the enterprise
- Collecting data
- Selecting emissions factors
- Mandatory reporting of emissions
- Voluntary reporting of emissions
- Carbon management principles and practices
- Carbon reporting standards
- Best practice in carbon reporting
- Indicators
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting enterprise records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can develop a carbon management report for the enterprise

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to carbon reporting
- following organisational policies and procedures relevant to carbon reporting
- selecting a suitable format for use by internal personnel and/or external authorities
- preparing relevant information and data for inclusion in the report
- preparing a carbon management report for sign-off and distribution

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Regulatory bodies** may include:
- International Organization for Standardization (ISO)
 - federal government departments
 - State/Territory government departments
 - local government departments and authorities
- Information and data** may include:
- diagram of organisational and operational boundaries
 - emissions sources and their scopes
 - reasons/justifications for decisions/selections
 - summary carbon inventory table
 - all carbon or energy reporting regulations applicable to the organisation
 - reporting thresholds
- Specific findings and recommendations** may include:
- comment on the inventory with regard to the organisation's original drivers
 - financial implications and risks for the organisation of various carbon price signals
 - whether or not the organisation's total carbon emissions breach any reporting thresholds
 - requirements of the voluntary reporting scheme or format with regard to the organisation's inventory
 - setting of carbon reduction targets and objectives for the organisation
 - options for the introduction of carbon management principles
 - identifying and recommending actions by which the organisation can reduce its GHG emissions
 - barriers experienced when developing the inventory and report
 - opportunities for improvement

RANGE STATEMENT

- suggesting improvements to the organisation's carbon reporting procedures

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPICOT6207A Develop forest management systems and processes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to develop, plan and implement systems to manage environmentally sustainable practices in forestry environments. It supports the establishment of a sound forestry management system necessary to produce outcomes that meet international treaties, conventions and initiatives; and commonwealth, state or territory legislation and policies

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves designing and managing systems for forestry management within workplaces, including developing and implementing processes in operations of all sizes in a variety of work settings, such as:

- native forests
- plantations
- agroforestry
- farm forestry

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Quantify and qualify factors to be included in the organisational forest management system | 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to developing forest management systems and processes are identified and followed
1.2. <i>Strategic factors</i> impacting on organisational compliance with <i>legislation and policies</i> are identified and quantified
1.3. Range and scope of activities being undertaken by the organisation within legislative and policy guidelines are quantified
1.4. <i>Information</i> is monitored to identify and maintain knowledge of forestry management issues
1.5. Qualifying strategic and operational factors impinging on organisational forestry management processes are measured |
| 2. Establish forestry management plan and system | 2.1. Strategic priorities are identified and planned that support overall legislative and policy guidelines
2.2. Design of the organisational forestry management |

ELEMENT	PERFORMANCE CRITERIA
	system is directed and managed
	2.3. Criteria for implementing and maintaining systems concerned with managing forests are developed
	2.4. Methods are developed to gather and monitor forest management information
	2.5. <i>Forest management plans</i> and system are regularly evaluated to ensure accuracy and compliance with legislation and policies
3. Facilitate the introduction of the forest management system	3.1. <i>Processes</i> for forestry management are developed and introduced
	3.2. Processes are circulated within the organisation and sign-off by staff, employees and contractors is obtained
	3.3. Compliance of staff, employees and contractors is monitored
	3.4. <i>Feedback systems</i> are developed, circulated and maintained to ensure all stakeholders can support the forestry management process
4. Implement forest management system	4.1. Methods for determining effectiveness of the major elements of the forest management system are introduced
	4.2. <i>Resources</i> are allocated to the implementation process in line with timelines and budget
	4.3. Those involved in implementing the system are informed of expected outcomes, and responsibility for designated roles is assigned
	4.4. <i>Operational controls</i> for implementing plans are established
	4.5. Staff are trained to ensure that quality assurance practices are applied to the forestry management process on a daily basis
5. Monitor and evaluate forest management system	5.1. Routine monitoring of forestry management plans and programs is conducted
	5.2. Information on the condition of forests is evaluated and considered for ongoing improvements
	5.3. Reports are monitored for compliance with regulations and controls
	5.4. Corrective action is taken to ensure compliance
	5.5. System is regularly evaluated and modified to reflect ongoing improvement

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use software and communication systems to research, analyse, create and present documents and reports; develop and implement systems and processes to manage forests
- Communication skills sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to read and evaluate complex and formal documents, such as policy and legislation
- Numeracy skills sufficient to analyse data for compliance with regulations and controls
- Problem solving skills sufficient to review and identify system requirements; identify problems; develop and implement appropriate response processes
- Planning and organisational skills sufficient to plan the forestry management system and process

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to developing forest management systems and processes
- International treaties, conventions and initiatives relevant to developing forest management systems and processes
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for managing forests
- Environmental risks and hazards
- Procedures for minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Forestry management issues that impact on the organisation and its practices
- Financial and business administration principles relevant to organisational needs
- Factors to be considered in assessing forestry management issues inherent in different types of forests
- Key factors that influence decisions on forestry management issues and decision making
- Established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- Problem identification and resolution strategies; common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete implementation programs
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can develop forest management systems and processes

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to developing forestry management systems and processes
- following organisational policies and procedures relevant to developing forestry management systems and processes
- quantifying and qualifying the factors to be included in the forest management system
- facilitating the implementation of a forest management system for an organisation
- establishing and implementing a forest management system for an organisation
- monitoring and evaluating a forest management system

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and

EVIDENCE GUIDE

environmental constraints

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements

may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination

RANGE STATEMENT

Organisational requirements may include:

- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Strategic factors may include:

- international treaties, conventions and initiatives
- commonwealth government legislation
- national policies
- state or territory legislation and policies
- local authority by-laws, Acts or regulations affecting environmental issues
- location and nature of sites
- scope of operations and activities of the organisation
- management commitment to forest management systems
- organisational policy and operational guidelines
- public liabilities and exposure to risk
- risk-management strategies and policies
- structure of the management team and apportionment of responsibilities

Legislation and policies must include:

- international treaties, conventions and initiatives
- commonwealth government legislation
- national policies
- state or territory legislation and policies

Information may include:

- international publications

RANGE STATEMENT

Forest management plans may include:

- government publications
- local government publications
- strategic planning
- forest management planning, including:
 - public land
 - park planning
 - private land
- fire management planning
- flora and fauna planning
- cultural values
- exploration and mining
- quality plans
- environmental and safety

Processes may include:

- communication
- monitoring
- reporting
- feedback
- evaluation
- ongoing review

Feedback systems may include:

- emergency or process-breakdown communication channels
- formal meetings between staff, employees and contractors on a regular basis
- programmed appraisals of compliance with forestry management and environmental policy involving staff, employees and contractors
- programmed reporting and environmental conformance statements and timetables

Resources must include:

- people
- materials
- equipment

Operational controls may include:

- timber harvesting
- fire management operations
- other activities in state or territory forests
- operations in national parks
- other operations on public land
- activities on private land

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical

FPIFGM2201B Collect seed

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to collect, treat and store seed

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM2201A Collect seed

Application of the Unit

Application of the unit The unit involves collecting seed in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to collect seed	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to collecting seed are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Site <i>environmental protection measures</i> are followed in line with relevant legislation and regulations</p> <p>1.4. Potential locations for the collection of required seeds are identified and required <i>approvals</i> are sought and obtained from <i>relevant authorities</i></p> <p>1.5. <i>Equipment and resources</i> appropriate to work requirements are selected and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.6. Seed collecting operations are checked to ensure safe working conditions and <i>planned</i> in line with site procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Select and assess seed	<p>2.1. Plant species and condition are visually assessed and checked to ensure the collection of healthy seeds</p> <p>2.2. Method of seed collection is selected and applied without causing damage to <i>health of parent plant</i></p> <p>2.3. Seed is collected from a range of plants and from different areas of plants to maintain genetic diversity</p> <p>2.4. Seed is placed in clean containers and accurately</p>

ELEMENT	PERFORMANCE CRITERIA
3. Clean and store seed	<p data-bbox="619 293 1307 365"><i>labelled</i> in line with industry, site and organisational requirements</p> <p data-bbox="619 383 1307 495">3.1. Seed is <i>separated</i> from other materials, weighed and stored in line with species requirements and site procedures</p> <p data-bbox="619 506 1307 577">3.2. <i>Seed treatment</i> is applied to prevent deterioration in line with seed species and site procedures</p> <p data-bbox="619 589 1307 660">3.3. <i>Seed information</i> is accurately recorded in line with site procedures</p> <p data-bbox="619 672 1307 743">3.4. Seed is <i>packaged</i> for storage in line with industry, legislative and organisational requirements</p> <p data-bbox="619 754 1307 819">3.5. Seed collection information and results are <i>recorded and reported</i> in line with site procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant equipment and resources; efficiently and safely carry out seed collecting procedures; identify a range of seed species and apply accurate identifying information; use a range of seed collection methods and related equipment
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and maintain information, including details of seed species, weight and place of origin
- Numeracy skills sufficient to apply appropriate mathematical techniques to calculate seed weights and quantities
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for collecting seed
- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition

REQUIRED SKILLS AND KNOWLEDGE

on completion of activity

- Organisational and site standards, requirements, policies and procedures for collecting seed
- Environmental risks and hazards
- Procedures for minimising environmental impact
- Range of seed species and appropriate collection, treatment and packaging processes, including storage requirements for different seed species
- Types of diseases and pests likely to infect a range of seed species
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can apply safe and efficient techniques to collect, treat and store a range of seed species in line with species requirements and organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to collecting seed
- following organisational policies and procedures relevant to collecting seed
- safely and efficiently using and maintaining seed collecting equipment and resources

EVIDENCE GUIDE

Context of and specific resources for assessment

- treating and storing seed in line with site and industry specifications
- recording seed collection information and results, and maintaining workplace information
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations,

RANGE STATEMENT

certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- information and instructions for collecting, treating and storing seed

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

RANGE STATEMENT

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards
- obstacles

Approvals may include:

- licences and permits required for commercial and non-commercial seed collection
- government permits
- landholder permits

Relevant authorities may include:

- local governments
- parks and reserves managers
- forestry managers
- relevant government departments and agencies/ authorities, such as those involved in sustainability and environmental issues
- relevant Indigenous organisations and agencies

Equipment and resources may include:

- personnel
- vehicles
- pruning and shaking equipment
- sheets
- tarpaulins
- clean containers for holding seeds
- vacuum seed collecting machines
- ladders or elevated work platforms
- personal protective equipment

Planning includes:

consideration of:

- seed collection seasons
- when the required species have fruit at optimal condition

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding

RANGE STATEMENT

- use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - collecting after falling or felling
 - using ladders
 - climbing
 - shaking
 - high-powered rifles
 - cherry-pickers
 - hand picking
 - careful and selective pruning
- Method of seed collection** may include:
- Health of parent plant** may require:
- Labelling** may include:
- Separation** methods may include:
- seed location
 - genetic identity
 - hand selection
 - wind separation/winnowing
 - sieving
 - vibrating
 - flotation
 - drying
 - crumbling of husks
- Seed treatment** may include:
- heat
 - mechanical
 - chemical protection against pests
- Seed information** may include:
- time and date of harvest
 - time and date of receipt into store
 - weight
 - species
 - place or origin of seed
 - container identifier
- Packaging** may include:
- vacuum sealing
 - use of inert atmospheres, such as nitrogen and carbon dioxide
 - control of packing environment, including temperature, light and moisture
- Records and reports** may be maintained by:
- electronic database
 - card index

RANGE STATEMENT

- data sheets
- filing systems

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2202B Prepare seedbed

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to select and implement appropriate seedbed preparation techniques, and to survey and review the prepared seedbed

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2202A Prepare seed bed

Application of the Unit

Application of the unit

The unit involves preparing seedbeds in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---------------------------------------|---|
| 1. Select site preparation techniques | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to preparing seedbeds are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are identified and adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked as required with <i>appropriate personnel</i></p> <p>1.4. <i>Range of appropriate seedbed preparation techniques</i> is <i>evaluated</i> and preferred technique is selected and recommended</p> <p>1.5. Analysis and recommendations are documented and prepared in an appropriate format for approval</p> <p>1.6. Required approvals are identified, sought and obtained from appropriate personnel</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Plan and prepare site | <p>2.1. Site preparation plan is determined and developed in line with work order and environmental requirements</p> <p>2.2. Potential and existing risks and hazards in the work area are identified and controlled</p> <p>2.3. <i>Site plan</i> is documented and prepared in the appropriate style and format</p> <p>2.4. Seedbed is prepared using appropriate techniques in line with site plan</p> <p>2.5. Seedbed preparation is monitored and adjustments are made as required to accommodate contingencies</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Survey and review seedbed	<p data-bbox="619 293 1182 360">in line with site plan and organisational and environmental requirements</p> <p data-bbox="571 376 1307 450">2.6. <i>Limitations</i> are identified and assistance is sought as required in line with workplace procedures</p> <p data-bbox="571 465 1182 539">3.1. Seedbed is surveyed in line with workplace procedures and organisational guidelines</p> <p data-bbox="571 555 1206 629">3.2. Survey results are collated and reviewed, and remedial action is undertaken as required</p> <p data-bbox="571 645 1307 741">3.3. Site preparation is assessed and evaluated to confirm that techniques, methodologies and budgets are in line with site plan and work order</p> <p data-bbox="571 757 1294 831">3.4. <i>Recommendations</i> for improving methods and techniques used to prepare seedbeds are documented</p> <p data-bbox="571 846 1206 898">3.5. Seedbed preparation process is <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment; plan and prepare a seedbed
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to collate and review information against specified criteria; locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for preparing seedbeds
- Environmental protection requirements, including the safe disposal of waste material

REQUIRED SKILLS AND KNOWLEDGE

- Organisational and site standards, requirements, policies and procedures for preparing seedbed
- Environmental risks and hazards
- Techniques for seedbed preparation
- Site preparation requirements for particular seed species
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can assess, plan and select suitable techniques to implement seedbed preparation processes, and review and report outcomes

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to preparing seedbed
- following organisational policies and procedures relevant to preparing seedbed
- coordinating and scheduling resources and managing the work of others to achieve specific outcomes
- developing a site preparation plan and conducting a risk analysis identifying mitigating methods for potential risks
- implementing and monitoring seedbed preparation

EVIDENCE GUIDE

- using appropriate site preparation techniques
- reviewing, evaluating and reporting survey results of seedbed preparation
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of essential required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the essential required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements
may include:

Environmental protection
measures:

may relate to:

- hygiene of the area
- relevant commonwealth, state, territory and local legislation and regulations

may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection

RANGE STATEMENT

- ground hazards
- obstacles

measures may also include:

- contingencies for modifying operations during wet or other adverse weather conditions
- details of organisational terminology
- guidelines
- plans
- budgets
- policies and timelines
- internal memos
- resources, including people, plant, equipment and consumables
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Work order may include:

- supervisors
- clients
- colleagues
- line management
- relevant external authorities and agencies, including:
 - local, state, territory and federal agencies
 - utility providers, such as gas, water, power and telecommunications
 - environmental protection
 - private owners
 - fire services

Appropriate personnel may include:

Range of seedbed preparation techniques may include:

- herbicides
- burning
- clearing
- rough-heaping
- cultivation
- ripping
- post-raking

Evaluation may involve:

- consideration of the species
- range of species to be sown or planted
- season
- topography of the area

RANGE STATEMENT

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Site plan may include:

- information detailing the forest area to be prepared
- particular preparation techniques to be used
- scheduling
- resource requirements
- responsibilities

Limitations may relate to:

- job role and responsibilities
- own competency level
- industry requirements
- own understanding of risk identification processes
- own interpretation of legislation
- regulations and procedures
- OHS and environmental requirements

Recommendations may come from:

- staff or contractors undertaking the work
- external bodies
- clients
- client groups

Records and reports may document:

- techniques used
- resources used
- timeframes
- results
- recommendations

and may include:

- collation of information or documentation
- interpretation of information in a way relevant to workplace requirements
- accurate organisation and maintenance of records
- use of a full range of information media,

RANGE STATEMENT

including written and printed, verbal, electronic, visual display units and personal computers

may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2203B Plant trees by hand

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to undertake forest planting operations by hand. It includes the selection and planting of suitable tree stock, and the use and maintenance of equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2203A Plant trees by hand

Application of the Unit

Application of the unit The unit involves planting trees by hand in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------------------|--|
| 1. Prepare for planting operations | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planting trees by hand are identified and followed</p> <p>1.2. <i>Planting requirements</i> and <i>factors</i> are identified from work order and applied in line with site and quality control requirements</p> <p>1.3. <i>Equipment</i> appropriate to work requirements is selected and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.4. Potential and existing risks, hazards and site conditions are identified and assessed in line with OHS and environmental requirements</p> <p>1.5. Planting stock is appropriately stored in line with operational requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Plant forest trees | <p>2.1. Plant site is <i>assessed</i> for suitability and <i>prepared</i> in line with tree stock and work order</p> <p>2.2. Tree stock is selected and <i>planted</i> in line with production target, quality, safety and specific job requirements</p> <p>2.3. Work methods and patterns are selected to suit particular operation and make efficient use of equipment and available time and resources</p> <p>2.4. <i>Problems</i> are identified and resolved in line with site procedures and environmental requirements</p> |

ELEMENT**PERFORMANCE CRITERIA**

- 2.5. Equipment is maintained and stored in line with manufacturer recommendations and workplace procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant planting equipment; recognise common diseases, pests and nutrition deficiencies; efficiently and safely select and handle tree stock
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to locate, record and report information
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards and codes of practice relevant to the full range of processes for planting trees by hand
- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for planting trees by hand
- Environmental risks and hazards
- Typical stock defects, including pests, diseases and nutrition deficiencies
- Techniques for operating in forest settings
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plant trees by hand

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to planting trees by hand
- following with organisational policies and procedures relevant to planting trees by hand
- planting tree stock by hand with minimal handling while adapting work methods or patterns to suit particular operation
- identifying and resolving problems, including potential site or equipment hazards, unsuitable planting stock, pests, disease and nutrition deficiencies

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit

EVIDENCE GUIDE

Method of assessment

- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work

RANGE STATEMENT

situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements

may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice, and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance

RANGE STATEMENT

- procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting
 - equipment use, maintenance and storage
 - environmental management (waste minimisation and disposal, recycling and re-use guidelines)
- Planting requirements** may include:
- planting site and environmental requirements
 - examining stock sampling
 - examination and assessment criteria
- Factors** may include:
- planting depth
 - spacing
 - root placement
 - firmed vertical and undamaged
- Equipment** may include:
- spade
 - planting frame
 - harness
 - box seedlings
 - auger
 - personal protective equipment
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Assessment** may include:
- checking for appropriate atmosphere, moisture content and season
 - appropriate spacing and growth suitability for each tree
- Preparation** may include:
- hole depth
 - hole width
 - cultivation
 - tube planter

RANGE STATEMENT**Planted** may include:

- planting bag
- minimal handling of tree stock to minimise foliage and root damage

Problems may include:

- monitoring planting to ensure quality
- equipment faults and malfunctions
- unsuitability of stock
- common diseases and pests
- nutrition deficiencies
- communication misunderstandings
- environmental issues or damage
- production quality
- safety

Unit Sector(s)

Not Applicable

Competency field**Competency field** Forest Growing and Management

FPIFGM2204B Plant trees mechanically

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to undertake forest planting operations mechanically. It includes the selection and planting of suitable tree stock, and the use and maintenance of equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2204A Plant trees mechanically

Application of the Unit

Application of the unit

The unit involves planting trees mechanically in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------------------|--|
| 1. Prepare for planting operations | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planting trees mechanically are identified and followed</p> <p>1.2. <i>Planting requirements</i> and <i>factors</i> are identified from work order and applied in line with site and quality control requirements</p> <p>1.3. Pre-startup checks are completed on <i>equipment</i> in line with manufacturer recommendations</p> <p>1.4. Suitable personal protective equipment and clothing are selected and used</p> <p>1.5. Potential and existing risks, hazards and site conditions are identified and assessed in line with OHS and environmental requirements</p> <p>1.6. Planting stock is stored and prepared for planting in line with operational requirements</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Plant forest trees | <p>2.1. Tree stock is selected and plant site <i>prepared</i> in line with job and quality requirements</p> <p>2.2. Tree stock is <i>planted</i> in line with production target, quality, safety and specific job requirements</p> <p>2.3. Work <i>methods</i> and patterns are selected to suit particular operation and make efficient use of equipment and available time and resources</p> <p>2.4. <i>Problems</i> are identified and resolved in line with site procedures and environmental requirements</p> |

ELEMENT**PERFORMANCE CRITERIA**

- 2.5. Equipment is maintained and stored in line with manufacturer recommendations and workplace procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant planting equipment; recognise common diseases, pests and nutrition deficiencies; efficiently and safely select and handle tree stock
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to locate, record and report information
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planting trees mechanically
- Environmental protection requirements, including the safe disposal of waste material, returning the environment to its original or near to original condition on completion of activity and minimising carbon emissions
- Organisational and site standards, requirements, policies and procedures for planting trees mechanically
- Environmental risks and hazards
- Role of wood or waste products in generating renewable energy through biomass
- Typical stock defects, including pests, diseases and nutrition deficiencies
- Techniques for operating in forest settings
- Procedures for pre-operational checks on equipment
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plant trees mechanically in line with job and environmental requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to planting trees mechanically
- following organisational policies and procedures relevant to planting trees mechanically
- planting tree stock mechanically with minimal handling, while adapting work methods or patterns to suit particular operation
- identifying and resolving problems, including potential site or equipment hazards, unsuitable planting stock, pests, disease and nutrition deficiencies

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in

EVIDENCE GUIDE

an off-site context

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Planting requirements may include:

- planting site and environmental requirements
- examination of stock sampling
- examination and assessment criteria

Factors may include:

- planting depth
- spacing
- root placement
- firmed vertical and undamaged
- position of seedling in row

Equipment may include:

- planting machine
- tube planter
- planting frame
- harness
- box seedlings
- auger
- personal protective equipment

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

RANGE STATEMENT

Preparation may include:

- hole depth
- hole width
- cultivation

Planted may include:

- minimal handling of tree stock to minimise foliage and root damage
- monitoring planting to ensure quality

Methods may include:

- feeding tree stock into the planting machine where required

Problems may include:

- equipment faults and malfunctions
- unsuitability of stock
- common diseases, pests and nutrition deficiencies
- communication misunderstandings
- environmental issues or damage
- production quality
- safety

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2205B Prune trees

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to carry out the work involved in selecting appropriate trees and preparing them for pruning, and performing and assessing the pruning process

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2205A Prune trees

Application of the Unit

Application of the unit

The unit involves pruning trees in a variety of work settings, including:

- forest environment
- farms
- agriculture
- workshops
- domestic
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---------------------------|---|
| 1. Prepare for pruning | 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to pruning trees are identified and followed
1.2. Site <i>environmental protection measures</i> are identified and adhered to in line with relevant legislation and regulations
1.3. Pruning requirements are determined from <i>work order</i> and checked with <i>appropriate personnel</i>
1.4. <i>Equipment</i> appropriate to work requirements is selected and checked for operational effectiveness in line with manufacturer recommendations
1.5. <i>Hazards</i> and site conditions are inspected and assessed in line with regulations, site procedures and environmental requirements
1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Select and prune trees | 2.1. Trees are <i>selected</i> in line with work order to meet production target and quality requirements |

ELEMENT	PERFORMANCE CRITERIA
3. Assess pruning quality	<p>2.2. Trees are <i>pruned</i> in line with work order to meet production target and quality requirements</p> <p>2.3. Suitable personal protective clothing and equipment are selected, used and maintained in line with site procedures</p> <p>2.4. Ladder handling and pruning techniques are used in line with site standards and OHS requirements</p> <p>2.5. Problems and equipment faults are identified and reported in line with site procedures</p> <p>3.1. Trees are assessed to ensure appropriate selection, pruning quality and pruned stock level in line with work order and environmental requirements</p> <p>3.2. Incorrect pruning is rectified in line with site procedures</p> <p>3.3. Pruned material is <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>3.4. Pruning process is <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; identify and select crop trees; efficiently and safely apply pruning techniques; recognise common diseases, pests and nutritional deficiencies
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others, including landholders and internal and external bodies and groups
- Literacy skills sufficient to locate, record and report information
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for pruning trees

- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for pruning trees
- Environmental risks and hazards
- Using material effectively and efficiently
- Form pruning techniques
- Hazards associated with pruning trees
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently identify appropriate trees and apply accurate pruning techniques to crop trees

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to pruning trees
- following organisational policies and procedures relevant to pruning trees

EVIDENCE GUIDE

- pruning trees in line with work order and organisational requirements
 - selecting, using, transporting and storing pruning equipment
 - assessing pruned trees against work order and rectifying incorrect pruning outcomes
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions

RANGE STATEMENT

- hygiene of the area
 - relevant commonwealth, state or territory, and local legislation and regulations
- Work order** may include:
- tree species
 - required safety clothing and equipment
 - required pruning equipment
 - tree selection
 - production target
 - required pruning quality
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
- Equipment** may include:
- pruners
 - jacksaw
 - pouch
 - steps
 - epicormic remover
 - pole saw
 - ladder
 - climbing gear
 - elevated work platform
 - cherry picker
- Hazards** may include:
- slope
 - water
 - rock
 - undergrowth
 - slash
 - depressions and holes
 - falling or fallen branches
 - ladder placement or instability
 - climbing ladders
 - loss of balance
 - damp conditions
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback

RANGE STATEMENT

- active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Selected** may include:
- dominance and vigour
 - leader defects
 - straightness
 - lean
 - size
 - angle
 - number of branches
 - overall tree health
 - stocking
 - green crowns
 - spacing and quality requirements
- Pruned** is the process of removing branches, epicormics and green shoots to ensure quality requirements
- Disposing of** may include:
- recycling pruned material where appropriate
 - sending pruned material to landfill where it cannot be recycled
 - redirecting pruned material for energy recovery
- Records and reports** may include:
- pruning outcomes and processes
 - production and quality
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2206B Collect data or samples for assessment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to collect data or samples from specified areas for the purposes of assessment. The unit includes interpreting maps and plans, marking the sample area, measuring aspects of the sample area, and recording the results in a format suitable for further analysis

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2206A Collect data or samples for assessment

Application of the Unit

Application of the unit The unit involves collecting data or samples for assessment in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for sampling	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to collecting data and <i>samples</i> are identified and followed</p> <p>1.2. <i>Sample area, purpose and requirements</i> are identified from map or plan <i>work order in line with organisational requirements</i></p> <p>1.3. <i>Relationship of sample area to the whole</i> is identified and interpreted</p> <p>1.4. Required <i>equipment</i> is identified and obtained in line with work instructions</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Collect data or samples	<p>2.1. Sample area is <i>marked</i> in line with work instructions and organisational procedures</p> <p>2.2. <i>Measurements</i> are taken using suitable equipment in line with work instructions and organisational procedures</p> <p>2.3. <i>Unclear or obliterated markings are re-marked using suitable equipment in line with organisational procedures</i></p> <p>2.4. Samples are collected and labelled in line with work instructions and organisational procedures</p>

ELEMENT	PERFORMANCE CRITERIA
3. Complete records	<p data-bbox="579 293 1281 365"><i>2.5. Problems are identified and resolved in line with site procedures and environmental requirements</i></p> <p data-bbox="579 383 1230 495">3.1. <i>Records and reports</i> are completed in a format suitable for analysis in line with site and organisational requirements</p> <p data-bbox="579 501 1262 573">3.2. <i>Results are checked for omissions and errors in line with organisational requirements</i></p> <p data-bbox="579 584 1281 656">3.3. Completed records are submitted for further assessment in line with organisational requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to review and identify work requirements
- Communication skills sufficient to use appropriate communication and interpersonal techniques; locate, record and report information
- Literacy skills sufficient to read, interpret and use site plans and maps
- Numeracy skills sufficient to apply appropriate mathematical processes to mark sample area and boundaries; take and read measurements; use measuring and marking equipment
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for collecting data or samples
- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for collecting data or samples
- Environmental risks and hazards
- Common trees and plants
- Correct safety equipment
- Local topography and hazards

REQUIRED SKILLS AND KNOWLEDGE

- Typical common diseases, pests and nutrition deficiencies
- Methods for moving through the forest environment safely
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of equipment and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently collect data or samples for assessment, including demonstrating appropriate marking and measuring procedures in line with site standards

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to collecting data or samples
- following organisational policies and procedures relevant to collecting data or samples
- communicating and working safely with others in the work area
- identifying and marking sample area and boundaries from maps and site plans, including identifying potential hazards
- collecting samples and taking measurements using suitable equipment

EVIDENCE GUIDE

Context of and specific resources for assessment

- accurately and clearly recording results of data or sampling collection in a format suitable for analysis and interpretation
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Samples may include:

- foliage
- wood
- soil
- seeds
- pollen
- weeds
- insects

Sample area may include:

- permanent areas
- for a single calculation
- boundaries and corners

Purpose may include:

- calculating the volume of timber
- calculating residue
- inventory control

RANGE STATEMENT

- stock count
 - plotting on site plans or maps
 - assisting with trials
 - damage assessment (e.g. insect, wind)
 - conducting pest and disease surveys
 - documenting site factors
- Requirements** may include:
- identifying:
 - locations
 - boundaries
 - starting point for measurement or sample
- Work order** may include:
- supervisor instructions
 - details of data or sample collection or measurement requirements
 - details of equipment to be used
 - details of existing markings or previous measurements
 - maps or site plans
 - purpose of assessment or measurement
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Relationship of sample area to the whole** may be identified as a:
- percentage
 - fraction
 - ratio
- Equipment** may include:
- personal protective equipment, such as boots and hard hat
 - measuring equipment, such as tools or instruments, including measuring tape, calliper, measuring pole, labels for samples, chainsaw and rifle
 - marking equipment, such as tools or instruments, including pruning shears, paint, purpose-specific balloons, flags, pegs and mallet
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative

RANGE STATEMENT

language

- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Marked

relates to boundaries and corners and may include:

- pegging
- spraying
- pruning
- placing flags
- placing balloons

Measurements may include:

- numbers
- measuring girth
- measuring lengths
- measuring diameter
- measuring circumference
- counting
- estimating cover/metre

Problems may include:

- hazards
- data or sample quality
- faulty equipment
- interpreting maps and site plans
- measuring and marking processes
- common diseases, pests and nutrition deficiencies
- local topography

Records and reports may include:

- notes
- completed proformas
- results of data or sample collection
- handwritten material

and may be:

- manual
- using a computer-based system
- other appropriate organisational communication system

Checked may include:

- re-checking for visual clues in:
 - measurements
 - actual sample area

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2207B Undertake brushcutting operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and safely carry out brushcutting operations. The unit includes using a brushcutter in forest operations and troubleshooting, which includes identifying faults, malfunctions and problems

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2207A Undertake brushcutting operations

Application of the Unit

Application of the unit

The unit involves undertaking brushcutting operations in a variety of work settings, including a forest environment and other settings such as farms, agriculture, workshops, domestic, nursery and local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for brushcutting	1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i> , <i>legislative</i> and <i>organisational requirements</i> relevant to undertaking brushcutting operations are identified and followed 1.2. Work order is reviewed and checked as required with <i>appropriate personnel</i> 1.3. <i>Tools and equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations 1.4. Blunt or damaged brushcutter blades are identified, <i>rectified</i> and reported in line with workplace procedures 1.5. Operational effectiveness of brushcutter blades is monitored to <i>maintain</i> cutting safety and productivity 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements
2. Assess vegetation and plan brushcutting	2.1. Site environmental concerns are identified and monitored in line with relevant commonwealth, state or territory and local legislation and regulations 2.2. <i>Environmental conditions</i> are identified and assessed in line with work order

ELEMENT	PERFORMANCE CRITERIA
3. Operate brushcutter	<p>2.3. <i>Limitations</i> are identified and assistance is sought as required in line with workplace procedures</p> <p>2.4. Potential and existing risks and hazards in the work area are identified and controlled</p> <p>2.5. Appropriate cutting methods for identified types of vegetation and situations are determined and planned to optimise time and safety</p> <p>3.1. Work is undertaken using established safe operating practices in line with workplace procedures, manufacturer recommendations and environmental requirements</p> <p>3.2. Brushcutter safety harness and handles are adjusted to provide the operator with the correct ergonomic position</p> <p>3.3. <i>Brushcutting</i> operations are undertaken appropriate to site conditions and at a safe distance from other personnel in the work area</p> <p>3.4. Brushcutter is monitored for operational effectiveness and is refuelled as required in line with manufacturer recommendations</p> <p>3.5. Cut vegetation is <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>3.6. Operational faults, malfunctions or problems are identified and reported in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to select, operate and maintain relevant tools, machinery and equipment; safely operate and maintain a brushcutter; assess, plan and carry out brushcutting operations appropriate to the vegetation and site conditions; recognise common diseases, pests and nutritional deficiencies
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; use hand signals with other operators to maintain effective and safe felling

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to locate, record and report information
- Numeracy skills sufficient to read and interpret written material; calculate slopes and weights in the metric system
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for undertaking brushcutting operations
- Environmental protection requirements, including the safe disposal of waste material, and the minimisation of environmental impact, including carbon emissions and noise
- Organisational and site standards, requirements, policies and procedures for undertaking brushcutting operations
- Environmental risks and hazards
- Established communication channels and protocols
- Methods of navigating and geographically orienting in the field
- Hazards of operating brushcutter, including kickback and flying objects
- Operational principles and limitations of brushcutters
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess, plan and conduct brushcutting operations in line with environmental and organisational requirements

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to undertaking brushcutting operations
- following organisational policies and procedures relevant to undertaking brushcutting operations
- assessing, planning and safely conducting brushcutting operations within the range of variables, vegetation and conditions
- selecting, using and maintaining appropriate tools and equipment
- safely operating and maintaining a brushcutter and its components

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required

EVIDENCE GUIDE

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Appropriate personnel** may
- supervisors

RANGE STATEMENT

include:

- clients
- colleagues
- line management

Tools and equipment may include:

- brushcutter and components
- fire equipment
- personal protective equipment and clothing
- first aid equipment
- maintenance requirements
- fuel

Rectify may include:

- repairing or sending for repair, blunt or damaged brushcutter blades
- recycling blunt or damaged brushcutter blades that cannot be repaired
- sending blunt or damaged brushcutter blades that cannot be repaired to landfill

Maintenance includes:

- safely sharpening blades
- changing components as required

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Environmental conditions may include:

- ground growth
- ground slope
- ground hazards
- noise
- weather

Limitations may include:

- job role and responsibilities
- own competency level
- industry requirements
- own understanding of risk identification processes
- own interpretation of legislation, regulations and procedures
- OHS and environmental requirements

RANGE STATEMENT

- Brushcutting:**
- will be undertaken in all conditions for which it is safe, including slopes up to the maximum allowed by applicable regulations
- Disposing of** may include:
- recycling cut vegetation
 - redirecting cut vegetation for energy recovery

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2209B Cut, sort and set cuttings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to cut, sort and set cuttings. The unit includes preparing cuttings and the growing environment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2209A Cut, sort and set cuttings

Application of the Unit

Application of the unit

The unit involves cutting, sorting and setting cuttings in a variety of work settings, including:

- farms
- agriculture
- workshop
- domestic
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------|--|
| 1. Prepare cuttings | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to cutting, sorting and setting cuttings are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are identified and adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked as required with <i>appropriate personnel</i></p> <p>1.4. Parent plant is prepared and suitable method applied to take cutting appropriate to the species</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Sort and select cuttings | <p>2.1. Work area is cleared and cleaned to eliminate contamination in line with hygiene practices, and organisational and environmental requirements</p> <p>2.2. Cuttings are visually assessed and selected for propagation in line with work order requirements</p> <p>2.3. Correct <i>conditioning and storage</i> procedures</p> |

ELEMENT**PERFORMANCE CRITERIA**

- appropriate to species requirements are identified and followed to maintain maximum viability of cuttings
- 2.4. Discarded cutting material is **disposed of** in line with workplace waste disposal guidelines, and organisational and environmental requirements
3. Prepare growing site
- 3.1. **Growing environment** and **weed retardants** are prepared and applied in line with work order, and organisational and environmental requirements
- 3.2. **Equipment** appropriate to work requirements is selected and checked for operational effectiveness in line with manufacturer recommendations
- 3.3. **Remedial action** is taken as required to control pests and diseases in line with specified planting program and environmental requirements
- 3.4. Outcomes from cutting, sorting and setting cuttings are **recorded and reported** to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to review and identify work requirements; use and maintain relevant tools, machinery and equipment; prepare and maintain a clean and hygienic work environment; apply correct preparation methods; recognise common diseases, pests and nutritional deficiencies
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others, including landholders, and internal and external bodies and groups
- Literacy skills sufficient to read and interpret information from tables and charts; locate, record and report information
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task; calculate space required for successful propagation
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards and

REQUIRED SKILLS AND KNOWLEDGE

codes of practice relevant to the full range of processes for cutting, sorting and setting cuttings

- Environmental protection requirements, including the safe disposal of waste material and the safe use and storage of chemicals
- Organisational and site standards, requirements, policies and procedures for cutting, sorting and setting cuttings
- Environmental risks and hazards
- Types and species of cuttings
- Media mixing, conditioning and storage procedures
- Growing environments and weed retardants that are suitable to plant and cutting species
- Pre-planting treatments, water and nutrients that are suitable to plant and cutting species
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently prepare cuttings and growth site, and sort and set correct cuttings by following specific guidelines, criteria and procedures

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- follow applicable commonwealth, state or territory legislative and regulatory requirements and codes of

EVIDENCE GUIDE

practice relevant to cutting, sorting and setting cuttings

- follow organisational policies and procedures relevant to cutting, sorting and setting cuttings
- using appropriate tools and equipment and maintaining a hygienic work environment
- efficiently and hygienically selecting, sorting and storing cuttings

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment

EVIDENCE GUIDE

of other units of competency

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures

Environmental requirements

RANGE STATEMENT

may include:

- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Environmental protection

measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles

RANGE STATEMENT

- contingencies for modifying operations during wet or other adverse weather conditions
 - hygiene of the area
 - relevant commonwealth, state or territory, and local legislation and regulations
- Work order** may include:
- plant species
 - required safety clothing and equipment
 - quality standard
 - stock
 - required height
 - species characteristics and requirements
 - nutrients
 - watering quantities and method
 - growing environment
 - weed retardants
 - cutting selection methodology
 - written instructions
 - diagrams
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Conditioning and storage** are in line with required species to allow for maximum viability
- Disposing of** may include:
- recycling discarded cutting material
 - re-using discarded cutting material

RANGE STATEMENT

Growing environment may include:

- heat
- light
- humidity
- wind
- sun
- moisture
- topography
- rainfall

Weed retardants may include:

- weed-mat
- slatted benches
- chemical solutions

Equipment may include:

- motorised or electrically-powered automated systems
- manually-operated equipment and tools

Remedial action may include:

- removal of infected material
- treatment of growing site with chemicals

Records and reports may include:

- tally sheets
- quality sheets and forms
- production sheets and downtime sheets

relate to:

- production details
- maintenance details
- breakdowns or equipment faults
- computer problems
- interruptions to production

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Forest Growing and Management

FPIFGM2210B Implement animal pest control procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to identify and control browsing pests, such as rabbits, foxes and rats

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM2210A Implement animal pest control procedures

Application of the Unit

Application of the unit The unit involves implementing animal pest control procedures in a variety of work settings, including:

- forest environments
- agriculture
- workshops
- domestic
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------|---|
| 1. Prepare to control pests | 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to implementing animal <i>pest</i> control procedures are identified and followed
1.2. Work order is reviewed and checked as required with <i>appropriate personnel</i>
1.3. Pests to be controlled are <i>identified</i> and <i>control method selected</i> and checked
1.4. Required permits or licences are identified, obtained and retained in line with organisational and regulatory requirements
1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Control pests | 2.1. Work is undertaken using established safe operating practices in line with site procedures and environmental requirements
2.2. Neighbouring landholders are notified of pest control operation and appropriate signage is erected in line with site procedures and environmental |

ELEMENT	PERFORMANCE CRITERIA
3. Complete pest control operation	<p>requirements</p> <p>2.3. Control methods are applied in line with local conditions, safety guidelines, environmental and legal requirements, and workplace procedures</p> <p>2.4. <i>Limitations</i> are identified and assistance is sought as required in line with workplace procedures</p> <p>3.1. Pests are disposed of in line with work order, and organisational, OHS and environmental management procedures and requirements</p> <p>3.2. Temporary signage is removed and stored in line with site procedures and environmental requirements</p> <p>3.3. Relevant records are completed and maintained in line with site procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; safely handle and store chemicals; place and set traps; carry out procedures to control pests with minimal animal distress
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to locate, record and report information
- Numeracy skills sufficient to calculate and measure quantities and rates for bait distribution
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for implementing animal pest control procedures
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and minimising environmental impact
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

implementing animal pest control procedures

- Environmental risks and hazards
- Established communication channels and protocols
- Hazards of handling traps and chemical baits
- Chemical bait uses and dose rates
- Animal-handling techniques to minimise animal distress
- Appropriate control methods for specific target species
- Legally approved animal pest control methods
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can correctly interpret and select the pest control method appropriate to the target species, and safely and efficiently carry out animal pest control operations within environmental and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to implementing animal pest control procedures
- following organisational policies and procedures relevant to implementing animal pest control procedures

EVIDENCE GUIDE

- communicating and working safely with others in the work area, including providing local notification of pest control operations
 - identifying and locating target species and selecting the appropriate pest control method
 - carrying out pest control operations with minimal animal distress
 - calculating dosage and rates of chemical baits for target species and using safe handling procedures
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT

may include:

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Pests may include:

- rats
- rabbits
- foxes
- kangaroos
- wallabies
- dogs

Appropriate personnel may include:

- supervisors
- clients

RANGE STATEMENT

- colleagues
 - line management
- Identification** may include:
- visual observation of tracks and/or faeces
 - work order
- Control method** may include:
- all legally approved forms of trapping pests
 - all legally approved baits and methods of distribution
 - legally approved shooting
- Selection** may include:
- forest type
 - species
 - organisational procedures
 - work order
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Limitations** may include:
- job role and responsibilities
 - own competency level
 - industry requirements
 - own understanding of risk identification processes
 - own interpretation of legislation, regulations and procedures
 - OHS and environmental requirements

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2211B Detect fires

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to detect fires and maintain communication with fire command or control. The unit includes identifying smoke and other fire-related sightings, and recording meteorological readings and other information, using required formats and conventions

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2211A Detect fires

Application of the Unit

Application of the unit

The unit involves detecting fires in a variety of work settings, including:

- forest environments
- mills
- timber and wood products production
- farms
- agriculture
- workshops
- domestic
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Locate position in the field	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>detecting fires</i> are identified and followed</p> <p>1.2. <i>Smoke</i> and current position in the field are identified using landmarks and key geographical features</p> <p>1.3. Current position in the field is located on a map or plan in line with site procedures</p> <p>1.4. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Record smoke and other sightings	<p>2.1. Smoke and other sightings are noted and reported promptly in line with organisational procedures</p> <p>2.2. <i>Sighting details</i> are recorded in line with required formats, conventions and site procedures</p>

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|---|--|
| 3. Communicate with fire command or control | <p>2.3. Accurate chronological log is maintained in line with required formats, conventions and site procedures</p> <p>2.4. Situations requiring <i>specialist advice</i> are identified and assistance is sought as required in line with site procedures</p> <p>3.1. <i>Communications equipment</i> is used to relay information accurately and clearly in line with <i>safe work practices, training</i> and site procedures</p> <p>3.2. Location of own position and sightings are accurately and clearly relayed to fire command or control using conventional descriptions</p> <p>3.3. <i>Relevant information</i> and conditions are accurately recorded and relayed using required formats and conventions in line with instructions</p> <p>3.4. Fire detecting processes and outcomes are <i>recorded and reported</i> to the <i>appropriate personnel</i></p> |
|---|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use landmarks and geographical features to locate position; effectively and safely climb fire towers; interpret map details and features; read a compass and estimate distances
- Communication skills sufficient to use appropriate communication methods, equipment and interpersonal techniques with colleagues and others
- Literacy skills sufficient to locate, record and report information
- Numeracy skills sufficient to apply mathematical processes to measure and record meteorological data
- Problem solving skills sufficient to review and identify work requirements; identify problems and hazards; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for detecting fires

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for detecting fires
- Organisational and fire command or control conventions for recording and reporting fire sightings in an emergency situation
- Environmental risks and hazards
- Precautions to be taken in a range of extreme weather conditions
- Smoke types, colour and meaning
- Terrain and features visible from a tower or aircraft
- Map types and features, including common scales used on maps and plans, and procedures for their use and manipulation
- Procedures for measuring and recording meteorological data
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and accurately detect fires and accurately report and record details of sightings

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and

EVIDENCE GUIDE

- codes of practice relevant to detecting fires
 - following organisational policies and procedures relevant to detecting fires
 - locating and identifying on a map or plan the current position of a fire from the field or air
 - noting and reporting sighting details, including estimated distances, in the required formats and conventions
 - accurately and clearly recording information, including a chronological log of sightings and meteorological measurements and readings
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and

RANGE STATEMENT

- carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Detecting fires** may be from:
- all types and locations commonly found in forested and grassland country
 - towers
 - aircraft

RANGE STATEMENT

Smoke may include:

assessing for:

- colour
- type
- meaning

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Sighting details may include:

- locations
- bearings
- estimated distances

Specialist advice may include:

- supervisor
- fire command or control
- colleagues
- local fire brigade

Communications equipment may include:

- public radio
- telephone networks or those used by the organisation
- local fire brigades
- emergency management organisations

Safe work practices may include:

- evacuation procedures when threatened by fire
- appropriate clothing
- hydration and nutrition requirements

Training may include:

- fire command or control
- supervisor
- colleagues

Relevant information may include:

- meteorological readings
- satellite imagery

Records and reports may include:

chronological log of sightings and noteworthy events, such as:

- significant changes in smoke column colour or size
- locations and bearings of sightings

RANGE STATEMENT

- estimated distances to sightings
- meteorological readings and conditions

and may be:

Appropriate personnel may include:

- manual
- a computer-based system
- other appropriate organisational communication system
- supervisors
- fire command or control
- colleagues
- managers

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2212B Graft cuttings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare and graft cuttings on to a mature plant. The unit includes application of pre-planting treatments and nutritional care

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2212A Graft cuttings

Application of the Unit

Application of the unit The unit involves grafting cuttings in a variety of work settings, including:

- forest environments
- farms
- agriculture
- workshops
- domestic
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare cuttings

- 1.1. Applicable ***occupational health and safety*** (OHS), ***environmental, legislative*** and ***organisational requirements*** relevant to grafting cuttings are identified and followed
- 1.2. Site ***environmental protection measures*** are identified and adhered to in line with relevant legislation and regulations
- 1.3. Work order is reviewed and checked as required with ***appropriate personnel***
- 1.4. ***Equipment*** appropriate to work requirements is selected and checked for operational effectiveness in line with manufacturer recommendations
- 1.5. Parent plant is prepared and suitable method is applied to take the cutting appropriate to the species
- 1.6. Correct conditioning and storage procedures appropriate to species requirements are identified and provided to maintain maximum viability of cuttings
- 1.7. ***Communication*** with others is established and maintained in line with OHS requirements

ELEMENT	PERFORMANCE CRITERIA
2. Sort and select cuttings	2.1.Organisational hygiene practices and procedures are identified and followed to maintain a contamination-free work area 2.2.Work is undertaken using established safe operating practices in line with workplace procedures and environmental requirements 2.3.Cuttings are visually assessed and selected for propagation in line with work order requirements 2.4.Discarded cutting material is <i>disposed of</i> in line with workplace waste disposal guidelines and organisational requirements
3. Graft cuttings on to mature plant	3.1.Mature plant is prepared for grafting and pre-planting treatment is applied using methods suitable to the species 3.2.Handling methods are used that prevent damage to cuttings 3.3.Grafting type is checked as appropriate to species type and identifying labels are applied in line with workplace procedures 3.4. <i>Nutrients</i> and <i>growing environment</i> for grafted cuttings are provided and maintained appropriate to the species requirements 3.5. <i>Remedial action</i> is taken as required to control pests and diseases in line with specified planting program 3.6.Grafting process is <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; take cuttings using suitable methods; prepare mature plants for grafting; prepare and apply accurate and clear labels; maintain a clean and hygienic work environment to prevent contamination
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others, including landholders and

REQUIRED SKILLS AND KNOWLEDGE

internal and external bodies and groups

- Literacy skills sufficient to read and interpret information from tables and charts; locate, record and report information
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for grafting cuttings
- Environmental protection requirements, including the safe disposal of waste material and the safe use and storage of chemicals
- Organisational and site standards, requirements, policies and procedures for grafting cuttings
- Environmental risks and hazards
- Types and species of cuttings
- Grafting methods
- Pre-planting treatments
- Water and nutrient requirements for cuttings
- Techniques of taking cuttings
- Conditioning and storage requirements for cuttings
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must

EVIDENCE GUIDE

be able to provide evidence that they can safely and efficiently take cuttings and prepare mature plants for grafting, graft cuttings, and maintain nutrient and growing environment requirements suitable to the plant species

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to grafting cuttings
- following organisational policies and procedures relevant to grafting cuttings
- using appropriate tools and equipment and maintaining a hygienic work environment
- using appropriate methods and techniques to graft cuttings onto a mature plant and maintaining a growing environment suitable to the plant species
- applying remedial treatments to plants as required

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks,

EVIDENCE GUIDE

with questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements

RANGE STATEMENT

- Environmental protection measures** may include:
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards and obstacles
 - contingencies for modifying operations during wet or other adverse weather conditions
 - hygiene of the area
 - relevant commonwealth, state or territory, and local legislation and regulations
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
- Equipment** may include:
- hand-held tools, such as grafting or budding knife
 - secateurs
 - grafting tape
- Communication may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Disposing of** may include:
- recycling discarded cutting material
 - sending discarded cutting material that cannot be recycled to landfill
- Nutrients** may include:
- chemicals
 - fertilisers
 - organic material

RANGE STATEMENT

Growing environment may include:

- heat
- light
- humidity
- wind
- sun
- moisture
- topography
- rainfall

Remedial action may include:

- removal of infected material
- treatment with chemicals

Records and reports may include:

- techniques used
- resources used
- timeframes
- results
- recommendations

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Forest Growing and Management

FPIFGM2213B Process seed

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to treat, store and despatch seed

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2213A Process seed

Application of the Unit

Application of the unit The unit involves processing seed in a variety of work settings, including:

- forest environments
- farms
- agriculture
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to process seed	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to processing seed are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Site <i>environmental protection measures</i> are followed in line with relevant legislation and regulations</p> <p>1.4. <i>Equipment</i> appropriate to work requirements is selected and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Seed processing operations are checked for safe working conditions and planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Treat and store seed	<p>2.1. Seeds are <i>separated</i> from other materials, weighed and stored in line with species requirements and site procedures</p> <p>2.2. <i>Seed treatment</i> is applied to prevent deterioration in line with seed species and site procedures</p> <p>2.3. <i>Seed information</i> is accurately recorded in line with</p>

ELEMENT	PERFORMANCE CRITERIA
3. Prepare seed sample for viability testing	<p>site procedures</p> <p>2.4. Seed is <i>packaged</i> for storage in line with industry, legislative and organisational requirements</p> <p>3.1. Seed sample for testing is identified and checked in line with work order</p> <p>3.2. Seed sample is removed from lot and prepared for testing in line with site procedures, and industry, organisational and environmental requirements</p> <p>3.3. Representative seed sample is clearly labelled and packaged for despatch to testing body in line with site procedures</p> <p>3.4. Seed sample information is accurately recorded in line with site procedures</p>
4. Despatch seed	<p>4.1. Seed <i>request specifications</i> are interpreted and checked with appropriate personnel</p> <p>4.2. Seed is retrieved from storage, and quantity and species of seed are calculated to meet request specifications</p> <p>4.3. Each seed species is weighed, documented and placed in an <i>appropriate container</i> in line with request requirements and site procedures</p> <p>4.4. Multiple seed lots are thoroughly mixed as required in line with request specifications</p> <p>4.5. Seed and seed mixtures are accurately and clearly labelled in line with industry requirements and site procedures</p> <p>4.6. Despatch of seed is organised and undertaken in line with request specifications and site procedures</p> <p>4.7. Seed processing results are recorded and reported in line with industry requirements, site procedures and environmental requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant equipment; efficiently and

REQUIRED SKILLS AND KNOWLEDGE

safely carry out seed processing procedures; identify a range of seed species and apply accurate identifying information

- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to locate, record and report information
- Numeracy skills sufficient to apply appropriate mathematical techniques to calculate seed weights and quantities
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for processing seed
- Environmental protection requirements, including the safe disposal of waste material and the safe use and storage of chemicals
- Organisational and site standards, requirements, policies and procedures for processing seed
- Environmental risks and hazards
- Using seed material effectively and efficiently
- Role of wood or waste products in generating renewable energy through biomass
- Established communication channels and protocols
- Types of seed processing equipment, and procedures for its safe use and maintenance
- Hazards associated with the storage, treatment and despatch of seed
- Range of seed species and treating, packaging and storage processes
- Range of seed treatments and storage requirements for different seed species
- Types of diseases and pests likely to infect a range of species
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can apply safe and efficient techniques to treat, store and despatch a range of seed species in line with species requirements and organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to processing seed
- following organisational policies and procedures relevant to processing seed
- applying effective methods to treat, package and store a range of seed species in line with work order instructions and within prescribed organisational tolerances
- operating and maintaining seed processing equipment
- despatching seed in line with seed request specifications
- recording seed processing information and results, and maintaining workplace information

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment

EVIDENCE GUIDE

Guidelines of the FPI11 Training Package

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

RANGE STATEMENT

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement

RANGE STATEMENT

processes and standards

- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- information and instructions for treating, storing and despatching seed

Work order is to include:

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards
- obstacles

Equipment may include:

- electric and manual scales
- various packaging materials and containers
- seed cleaning machine
- seed lot mixing device
- lifting device, such as overhead gantry and fork lift

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening

RANGE STATEMENT

- questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Separation** methods may include:
- hand selection
 - wind separation and winnowing
 - sieving
 - vibrating
 - flotation
 - drying
 - crumbling of husks
- Seed treatment** may include:
- fungicides
 - cleaning
- Seed information** includes: details of:
- species
 - time and date of harvest
 - time and date of receipt into store
 - place or origin of seed
 - container identifier
- Packaging** may include:
- vacuum sealing
 - use of inert atmospheres, such as nitrogen and carbon dioxide
 - control of packing environment, including temperature, light and moisture
- Request specifications** may include:
- seed species
 - percentage of seed mix
 - pure graded seed
 - rate of sowing
 - area to be sown
 - despatch container
 - method of despatch
 - sowing equipment to be used
- Appropriate container** criteria may include:
- length of time seed will be stored
 - method to be used to transport seed
 - equipment to be used for sowing seed
 - quantity of seed
 - size of individual seeds

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2214B Maintain visitor sites

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to maintain sites and facilities used by the public. The unit includes identifying and reporting site hazards and safely handling waste materials

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2214A Maintain visitor sites

Application of the Unit

Application of the unit

The unit involves maintaining visitor sites in forest environment settings

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for site maintenance

- 1.1. Applicable ***occupational health and safety (OHS), environmental, legislative and organisational requirements*** relevant to ***maintaining visitor sites*** are identified and followed
- 1.2. ***Maintenance requirements*** are identified from work order and supervisor instructions in line with organisational requirements
- 1.3. ***Supplies*** are identified and obtained in line with work order and organisational procedures
- 1.4. ***Equipment*** is selected, transported and stored in line with organisational requirements
- 1.5. Potential and existing site ***hazards*** are identified and assessed in line with OHS and environmental requirements, and organisational procedures
- 1.6. ***Communication*** with others is established and maintained in line with OHS requirements

2. Maintain site

- 2.1. Visitor site is inspected to determine maintenance and cleaning requirements in line with organisational procedures and environmental requirements
- 2.2. Visitor site is maintained in line with organisational and environmental requirements
- 2.3. ***Waste materials*** are handled and removed according to environmental, OHS and organisational requirements
- 2.4. ***Problems*** are identified, noted and reported in line with organisational procedures
- 2.5. Visitor site maintenance is ***recorded and reported*** to

ELEMENT **PERFORMANCE CRITERIA***appropriate personnel***Required Skills and Knowledge****REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; safely handle contaminated waste; identify hazardous or unsafe facilities; identify and order supplies of consumables for cleaning
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to locate, record and report information
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards and codes of practice relevant to the full range of processes for maintaining visitor sites
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of environmental impact, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for maintaining visitor sites
- Environmental risks and hazards
- Types of cleaning and maintenance equipment, and procedures for their safe use and maintenance
- Types of maintenance supplies and consumables
- Procedures for handling and removing waste material
- Operation of septic tanks and other plumbing associated with visitor use facilities
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks

REQUIRED SKILLS AND KNOWLEDGE

- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently maintain visitor sites according to work and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to maintaining visitor sites
- following organisational policies and procedures relevant to maintaining visitor sites
- maintaining visitor sites ensuring efficient and safe selection and use of equipment and supplies with no damage to equipment, property, environment, colleagues or the public
- identifying site hazards and problems and demonstrating an appropriate response, including reporting to supervisor
- handling and removing waste or contaminated material

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context

EVIDENCE GUIDE

Method of assessment

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environment requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Maintaining visitor sites may include:

- lawn mowing and edging
- raking leaves
- cleaning toilets, shower blocks and other structures
- supplying firewood
- repainting and other minor repairs
- removing rubbish

Visitor site may include:

- camp grounds
- toilet and shower blocks
- natural features

Maintenance requirements may include:

- selecting appropriate cleaning and maintenance equipment
- checking and ordering supplies of consumable items
- transporting and storing equipment

Supplies may include:

- toilet paper
- cleaning chemicals
- lawn mower fuel
- paint

Equipment may include:

- manual cleaning tools
- power tools
- petrol-driven lawn mowers
- whipper snipper and edger

Hazards may include:

- contaminated waste material
- visitors moving around adjacent to

RANGE STATEMENT

- maintenance activities
 - unsafe structures
 - deteriorated structures
 - natural features or facilities
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Waste material** may include:
- blood
 - bandages
 - sanitary bins
 - effluent
 - garbage
 - sharps
- Problems** may include:
- deteriorated or vandalised structures
 - natural features and facilities that do not meet enterprise acceptable standards
- Records and reports** may include:
- maintenance outcomes
 - hazards and incidents
 - equipment malfunctions and damage
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM2215B Measure trees

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to measure trees and record tree measurement data. The unit includes identification of tree abnormalities

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM2215A Measure trees

Application of the Unit

Application of the unit The unit involves measuring trees in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify tree measuring requirements	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to measuring <i>trees</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked as required with <i>appropriate personnel</i></p> <p>1.3. <i>Tools</i> are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.4. <i>Measurements</i> are obtained and checked</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Measure trees	<p>2.1. Work is undertaken using established safe operating practices in line with site procedures and environmental requirements</p> <p>2.2. Suitable personal protective equipment and clothing are selected, used and maintained</p> <p>2.3. Site environmental concerns are identified and followed in line with relevant commonwealth, state or territory, and local legislation and regulations</p> <p>2.4. Forest area to be worked within is identified from work order and located on the ground</p> <p>2.5. <i>Tree measurements</i> are accurately taken and recorded in the appropriate style and format in line with organisational and environmental requirements</p> <p>2.6. <i>Tree abnormalities</i> are identified, assessed and recorded in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to select, use and maintain relevant tools, machinery and equipment; identify tree form and abnormalities; locate forest or plot area in the field from a map or plan
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to locate, record and report information
- Numeracy skills sufficient to use appropriate mathematical techniques to calculate stand height and measure dimension and volume
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for measuring trees
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of environmental impact, and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for measuring trees
- Environmental risks and hazards
- Tree measuring techniques, including relevant mathematical calculations and basic trigonometry
- Species and characteristics of vegetation to be measured
- Types of measuring tools, and procedures for their safe use and maintenance
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can interpret written and verbal instructions to locate specified forest area to accurately carry out tree measurements within environmental and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to measuring trees
- following organisational policies and procedures relevant to measuring trees
- using and maintaining appropriate measuring tools
- locating forest or plot area from map or plan and carrying out a range of tree measuring procedures without causing damage to tree, environment, equipment or personnel

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and

RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Trees** may include:
- plantation trees of a variety of species and ages
 - native forest trees of a variety of species and ages
- Work order** may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
- Tools** may include:
- diameter tapes
 - length tapes
 - optical wedges
 - clinometers
- Measurements** include:
- tolerances, allowances, calibration requirements and special procedures
 - tree diameter and girth (over or under bark at breast height or ground level)
 - tree height
 - log length
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Tree measurements** include:
- calculating stand height in line with sampling technique

RANGE STATEMENT

- Tree abnormalities** may include:
- measuring log volume
 - classifying stem form or crown class
 - butt swell
 - double leaders
 - heavy branching
 - ramicorns

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM3201B Manage seed collection

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and monitor the implementation of seed collection or sowing programs. The unit includes collection of native and non-native species

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM3201A Manage seed collection

Application of the Unit

Application of the unit

The unit involves managing seed collection in a variety of work settings, including:

- forest environments
- farms
- agriculture
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Plan seed collection

- 1.1. Applicable ***occupational health and safety*** (OHS), ***environmental, legislative*** and ***organisational requirements*** relevant to managing ***seed collection*** are identified and followed
- 1.2. Site ***environmental protection measures*** are identified and adhered to in line with relevant legislation and regulations
- 1.3. Seeding and/or planting program is analysed and required ***seed characteristics*** and ***implementation issues*** are identified
- 1.4. Seed collection ***opportunities*** are identified and a suitable area for seed collection is determined and documented
- 1.5. ***Method of seed collection*** is selected and quantity, cost and ***impacts*** on provenances and species to be collected are determined and documented
- 1.6. Required ***approvals*** are identified, sought and obtained from relevant authorities
- 1.7. Measurable performance indicators, specifications

ELEMENT**PERFORMANCE CRITERIA**

- and targets are determined and documented
- 1.8. Seed collection *plan* and its performance indicators are clearly documented and communicated to *appropriate personnel*
2. Implement and monitor seed collection
- 2.1. *Resources* required for seed collection are coordinated and scheduled and required *documentation* is completed clearly and accurately
- 2.2. Relevant *individuals, bodies and groups* are consulted as required using appropriate interpersonal techniques
- 2.3. Seed collection plan is implemented and monitored in line with quality standards for seed collection
- 2.4. Systematic *checks* are carried out to ensure compliance requirements relevant to seed collection activities are adhered to
- 2.5. Adjustments to seed collection activities are made as required and communicated to appropriate personnel
- 2.6. *Communication* with others is established and maintained in line with OHS requirements
- 2.7. *Limitations* are identified and assistance is sought as required in line with workplace procedures
3. Review seed collection
- 3.1. Data and documentation from seed collection are assessed and evaluated to confirm techniques, methodologies and budgets are in line with plan
- 3.2. Issues and impediments to seed collection activities and program costs are identified and documented
- 3.3. Cost benefit analysis is prepared and recommendations are made, based on the analysis of data and identified issues
- 3.4. Results of seed collection are clearly communicated and disseminated to appropriate personnel
- 3.5. Seed collection process is *recorded and reported* to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; collate and assess information against specified criteria; supervise operational staff and contractors to achieve specific outcomes; recognise common diseases, pests and nutritional deficiencies; efficiently and safely manage the extraction of collected material
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others, including landholders, and internal and external bodies and groups
- Literacy skills sufficient to record and report workplace information; maintain documentation; write reports and submissions in appropriate style and format
- Numeracy skills sufficient to interpret numerical data; identify quantities and costings
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing seed collection
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for managing seed collection
- Environmental risks and hazards
- Flowering biology of the target species
- Biological signs that indicate that the seed crop is ready to be collected
- Procedures to extract and handle seed from collected material, including handling procedures of the seed crop after picking
- Treatment and documentation requirements of extracted seed
- Seed collection methods
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and supervise the implementation of seed collection activities within applicable environmental, legislative and organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing seed collection
- following organisational policies and procedures relevant to managing seed collection
- developing measurable performance indicators, specifications and targets and a seed collection plan within specified budgetary guidelines
- coordinating and scheduling resources, and managing the work of others to achieve specific outcomes
- monitoring seed collection operations, ensuring that relevant quality standards are followed
- documenting results from seed collection activities and preparing a report for dissemination to relevant personnel

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE

Method of assessment

- materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
 - Where the participant has a disability, reasonable adjustment may be applied during assessment
 - Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised**

RANGE STATEMENT

wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role

RANGE STATEMENT

and responsibility

- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Seed may include:

- native species
- non-native species

Seed collection may include:

- seed orchards
- forests
- softwoods and hardwoods
- rainforest
- understorey plants

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions
- hygiene of the area
- relevant commonwealth, state or territory, and local legislation and regulations

Seed characteristics may include:

- provenance
- potential growth characteristics
- forest types
- optimum time to collect
- physiology and biology
- dormancy
- species

RANGE STATEMENT

Implementation issues may include:

- scheduling
- people and skills involved
- materials
- hazards
- seed quantities
- selection

Opportunities may include:

- field observation
- organisational and other relevant information

Method of seed collection may include:

- climbing
- removal of branches with rifle
- elevated platform vehicles

consideration of the:

- geography of the local area
- size and type of trees
- available resources
- organisational guidelines

and may also include:

- collecting after falling or felling
- ladders
- shaking
- high-powered rifles
- cherry pickers

Impacts may include:

- requirements for genetic diversity
- frost
- heat
- salt hardiness
- potential growth characteristics

Approvals may include:

- heritage requirements
- environmental sustainability requirements
- other issues applying to seed collection operation

Plan may include:

- organisational terminology
- guidelines
- budgets
- policies and timelines
- internal memos
- resources, including people, material and equipment

Appropriate personnel may

- clients

RANGE STATEMENT

include:

- colleagues
- line management

those collecting the seed, such as:

- organisational employees
- contractors
- community groups

Resources may include:

- people
- material
- equipment

Documentation may include:

- provenance
- seed species and location
- identity of collector
- weight of seed collected

Individuals, bodies and groups may include:

- landholders
- commonwealth, state or territory, and local government authorities
- private individuals

Checks may include:

ensuring:

- relevant organisational OHS procedures, practices, policies and precautions are observed and followed
- site environmental requirements follow relevant commonwealth, state or territory, and local legislation and regulations
- performance indicators, targets and specifications are met
- quantity, cost and provenances collected are in line with plan specifications
- required organisational documentation is completed clearly and accurately

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

RANGE STATEMENT

Limitations may include:

- job role and responsibilities
- own competency level
- industry requirements
- own understanding of risk identification processes
- own interpretation of legislation, regulations and procedures
- OHS and environmental requirements
- difficulties or issues faced
- recommendations for future work, results and costs
- collation of information or documentation
- interpreting information in a way relevant to workplace requirements
- organising and maintaining records accurately
- using a full range of information media, including written, printed, verbal, electronic, visual display units and personal computers

Records and reports may include:

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Forest Growing and Management

FPIFGM3202B Extract seed

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to extract and process native or non-native seed using an extraction unit. It includes seed storage requirements and extraction unit maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM3202A Extract seed

Application of the Unit

Application of the unit

The unit involves extracting seed in a variety of work settings, including forest environment settings such as farms, agriculture, workshops, domestic, nurseries and local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Receive seed-bearing material into store	<p>1.1.Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to extracting <i>seed</i> are identified and followed</p> <p>1.2.<i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3.Seed bearing material is received, visually assessed, and species are identified and checked with container label</p> <p>1.4.Received containers are <i>weighed</i> and <i>identified</i> in line with site procedures</p> <p>1.5.Material is stored in dry and well-ventilated <i>conditions</i> in line with site procedures</p> <p>1.6.<i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Extract seed	<p>2.1.Seed is extracted in line with work order, and environmental and OHS requirements</p> <p>2.2.Seed extraction processes are planned and checked for safe working conditions</p> <p>2.3.<i>Extraction units and equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Seed extraction <i>systems</i> are operated and monitored in line with manufacturer recommendations
	2.5. Seed-bearing material is placed in or on extraction unit and agitation is undertaken as required to maximise yield
	2.6. Seed capsules are inspected and unextracted seed is reprocessed as required to ensure maximum yield
3. Clean and store seed	3.1. Seed is separated from other material, weighed and stored in line with species requirements and site procedures
	3.2. <i>Seed information</i> is accurately recorded in line with site procedures
	3.3. Seed is <i>packaged</i> for storage in line with industry, legislative, organisational and environmental requirements
4. Clean and maintain extraction unit	4.1. Residue and other waste material is disposed of in line with site environmental management guidelines
	4.2. Extraction units and equipment are cleaned, maintained and calibrated in line with manufacturer recommendations, site procedures and environmental requirements
	4.3. Abnormal operation or faults with extraction units and equipment are reported for corrective action in line with site procedures
	4.4. Work areas are cleaned and maintained in line with site procedures, and organisational and environmental requirements
	4.5. Seed extraction information and results are <i>recorded and reported</i> in line with site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain seed extraction units; efficiently and safely carry out seed extraction techniques; identify a range of seed species from capsules and apply accurate identifying information

REQUIRED SKILLS AND KNOWLEDGE

- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to apply appropriate mathematical techniques to calculate seed weights
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for extracting seed
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of environmental impact, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for extracting seed
- Environmental risks and hazards
- Hazards associated with seed extraction, processing and storage
- Range of seed species, including native and non-native
- Seed extraction processes for native and non-native species
- Storage procedures and requirements for different seed species
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must

EVIDENCE GUIDE

be able to provide evidence that they can apply safe and efficient techniques to identify, extract, clean and store seed in line with species requirements and organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to extracting seed
- following organisational policies and procedures relevant to extracting seed
- applying seed extraction and storage techniques in line with work order instructions and within prescribed organisational tolerances
- operating, cleaning and maintaining seed extraction units and equipment
- recording seed species information and extraction results, and maintaining workplace information

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks,

EVIDENCE GUIDE

with questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements

RANGE STATEMENT

- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Seed** may include:
- native species
 - non-native species
- Work order** is to include:
- information and instructions on material to be extracted
 - site seed extraction requirements
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Weight** may include:
- properly calibrating and maintaining scales
 - using scales for weighing under licence from the weights and measures authority
- Identifiers** may include:
- alphanumeric
 - bar codes
 - colour codes
 - symbols
- Conditions** for storage of material must be free of humidity or wetness to protect against incidence of fungus
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Extraction units and equipment** may include:
- kilns operated by gas, solar energy, oil or electricity
 - sieves of various sizes

RANGE STATEMENT

- air-drying racks and trays
 - lifting devices, such as overhead gantry, fork lift and conveyor belt
 - electronic and manual scales
- Systems** may include:
- electronic
 - manual
- Seed information** includes details of:
- species
 - weight
 - place or origin
 - container identifier
- Packaging** must:
- ensure protection of seeds
 - maintain traceability to collection source
- Records and reports may include:**
- seed species information
 - seed extraction processes and results
 - storage procedures
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM3203B Conduct an instrument survey

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan, monitor and implement an instrument survey for a range of survey purposes. The unit includes evaluation of the survey and reporting of outcomes

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM3203A Conduct an instrument survey

Application of the Unit

Application of the unit

The unit involves conducting an instrument survey in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Plan instrument survey | <p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to conducting an instrument survey are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Survey purpose</i> and specifications are identified and checked as required with <i>appropriate personnel</i></p> <p>1.4. <i>Relevant information</i> is obtained, interpreted and analysed for impact on current survey</p> <p>1.5. <i>Survey tools</i>, equipment and personnel requirements are coordinated and scheduled</p> <p>1.6. Permit or licence requirements are identified and organised in line with organisational requirements</p> <p>1.7. Survey method/s is <i>selected</i> and instrument survey is planned, scheduled and communicated to appropriate personnel</p> <p>1.8. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Implement and monitor instrument survey | <p>2.1. Instrument survey is conducted in line with work order, and environmental and OHS requirements</p> <p>2.2. Individuals, bodies and groups are consulted as</p> |

ELEMENT**PERFORMANCE CRITERIA**

	required during survey activity
	2.3. Survey procedures are systematically monitored to ensure survey specifications are being met in line with survey plan
	2.4. Survey plan is modified as required in response to equipment, personnel, site condition changes and environmental requirements
	2.5. Routine checks are conducted to ensure survey documentation and data are accurately and continuously recorded and completed
	2.6. Regular communication with survey personnel is maintained to ensure continuous workflow and progress
	2.7. Survey progress is routinely reviewed to ensure and maintain efficient options, and hazards or impediments to the survey are promptly rectified
3. Review instrument survey	3.1. Survey documentation and data are compiled and organised for review
	3.2. Map or plan is prepared in line with survey purpose requirements
	3.3. <i>Survey report</i> is prepared in appropriate format and processed in line with organisational guidelines
	3.4. Evaluation of survey plan and processes is undertaken and documented for use in reviewing and revising future instrument surveys
	3.5. Instrument survey outcomes are <i>recorded and reported</i> in line with site procedures and organisational requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, equipment and materials; develop, modify and assign suitable checking and maintenance procedures; read and interpret maps and undertake geographical orientation in the field; plan, coordinate and schedule tools, equipment and personnel requirements

REQUIRED SKILLS AND KNOWLEDGE

appropriate to work requirements

- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and people external to the organisation
- Literacy skills sufficient to record and report workplace information; maintain documentation; interpret, apply and convey information in written, diagrammatic and verbal form; read and interpret survey documentation and data
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task; interpret numerical data
- Problem solving skills sufficient to identify problems and arrange appropriate corrective action

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting an instrument survey
- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for conducting an instrument survey
- Environmental risks and hazards
- Role of wood or waste products in generating renewable energy through biomass
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Survey techniques and tools
- Safety issues and hazards associated with undertaking boundary surveys
- Methods of navigating and geographically orienting in the field
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan, implement and monitor an instrument survey in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to conducting an instrument survey
- following organisational policies and procedures relevant to conducting an instrument survey
- communicating and following safe work practices
- planning and coordinating instrument survey processes and implementing an instrument plan
- monitoring the collection of survey documentation and data, and preparing a survey report

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE

application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

RANGE STATEMENT

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage

RANGE STATEMENT

- Environmental protection measures** may include:
- requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards
 - obstacles
- Survey purpose** may be:
- to lay out a road line
 - to mark boundaries, such as establishment boundaries and forest area boundaries
 - for assessment
 - to lay out planting rows
 - for site design
 - for drainage design
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
 - neighbouring landholders
 - local authorities
 - environmental agencies/authorities
- Relevant information** may include:
- details of survey location
 - licence or permit requirements
 - previous site and boundary surveys
 - plans and maps
- Survey tools** may include:
- tape
 - hammer
 - pegs and pins
 - chain
 - measuring wheel
 - global positioning system (GPS)

RANGE STATEMENT

- Selection** of survey method/s is based on consideration of:
- site
 - area to be surveyed
 - survey purpose
 - accuracy requirements
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Survey report** may include:
- difficulties or issues faced
 - recommendations for future work results
 - costs
 - data analysis
- Records and reports may include:**
- survey purpose
 - survey techniques
 - survey processes
 - evaluation outcomes
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM3206B Plan and implement non-commercial thinning operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to control non-commercially thin species growing on site and stocking rate to ensure maximum vigour and optimum product outcome. The unit includes treatment with chemicals and the use of mechanical equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM3206A Plan and implement non-commercial thinning operations

Application of the Unit

Application of the unit

The unit involves planning and implementing non-commercial thinning operations in a variety of work settings, including:

- forest environments
- farms
- agriculture
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Plan thinning operations

- 1.1. Applicable *occupational health and safety* (OHS), *environmental*, *legislative* and *organisational requirements* relevant to planning and implementing non-commercial *thinning operations* are identified and followed
- 1.2. Site *environmental protection measures* are identified and adhered to in line with relevant legislation and regulations
- 1.3. Thinning operation *parameters* and *method* of operation are identified and checked with *appropriate personnel*
- 1.4. *Relevant plans*, legislation and regulations are reviewed and assessed to identify impact on thinning operations
- 1.5. Sample area is identified and trees are *measured* in

ELEMENT	PERFORMANCE CRITERIA
2. Implement thinning operations	<p>line with organisational procedures</p> <p>1.6. Level of <i>overwood treatment</i> is recommended, accounting for habitat or seed tree considerations in line with organisational procedures</p> <p>1.7. Necessary <i>approvals</i> are sought and obtained in line with organisational procedures</p> <p>2.1. Thinning operations are implemented in line with plans, budget, OHS, environmental and legislative requirements</p> <p>2.2. <i>Communication</i> with others is established and maintained in line with plans and OHS requirements</p> <p>2.3. Required <i>resources, equipment</i> and <i>authorisations</i> are coordinated and obtained in line with organisational and legislative requirements</p> <p>2.4. Schedule for operations is organised with appropriate personnel in line with organisational requirements</p> <p>2.5. Trees are marked for treatment in line with plan and organisational procedures</p> <p>2.6. <i>Documentation requirements</i> are identified and completed in line with OHS requirements</p>
3. Monitor thinning operations	<p>3.1. <i>Monitoring points</i> are identified and adhered to in line with organisational procedures</p> <p>3.2. Operation is <i>checked</i> to ensure compliance with environmental, OHS, organisational and legislative requirements</p> <p>3.3. Communication with coordinating personnel is maintained in line with OHS requirements</p> <p>3.4. Operations are amended as required to ensure specifications, quality and performance targets are met</p>
4. Review thinning operations	<p>4.1. Operation is reviewed against inventory program and organisational and environmental requirements</p> <p>4.2. <i>Information</i> and data are analysed to determine effectiveness of thinning operations and improvements to future operations</p> <p>4.3. Recommendations for future operations are prepared, based on assessment of information collected</p> <p>4.4. Operation processes are <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to analyse qualitative and quantitative information and data; handle retained stems without causing damage; protect stand from subsequent wind damage; collate and assess information against specified criteria; undertake treatments for overwood trees; recognise common diseases, pests and nutritional deficiencies
- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to prepare a range of reports, documentation and submissions where precise meaning is required; assess and extract critical information from sources, such as legislation and forest biology; record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and implementing non-commercial thinning operations
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the minimisation of noise and environmental impact
- Organisational and site standards, requirements, policies and procedures for planning and implementing non-commercial thinning operations
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Available products for thinning operations
- Available thinning methods
- Environmental imperatives for forest area
- Hazards associated with treatments
- Pests, diseases, tree form and nutritional defects
- Possible causes of damage to the stand
- Relevant biology and stand dynamics for the species
- Stand parameters for forest type

REQUIRED SKILLS AND KNOWLEDGE

- Treatments available for overwood trees
- Weed species and herbicide interactions
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan, implement and review non-commercial thinning operations

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to planning and implementing non-commercial thinning operations
- following organisational policies and procedures relevant to planning and implementing non-commercial thinning operations
- planning non-commercial thinning operations in consultation with management to obtain inputs, and ensure efficient and safe processes and timelines
- safely conducting a non-commercial thinning operation in line with documented plan and budget, including marking trees for appropriate treatment
- reviewing operations and using findings to document

EVIDENCE GUIDE

- improvements to future operations
- Context of and specific resources for assessment**
- preparing and presenting a detailed report, including costs, processes and assessment of the operation
 - Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements
may include:

Thinning operations

may be designed to:

- maintain the health of the stand
- improve productivity and long-term sustainability
- provide for end product mix requirements
- manage notifiable weeds

and may impact:

- organisation's public relations
- ground growth
- canopy
- general forest lean
- wind speed and direction

Environmental protection measures may relate to:

RANGE STATEMENT

- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions
- hygiene of the area
- relevant commonwealth, state or territory, and local legislation and regulations, including issues related to notification of neighbours

Parameters

may affect treatment recommendations and include:

- forest type
- size and geography of treatment area
- equipment and personnel available
- budget available
- local environmental conditions
- age and size of trees and stand parameters, including DBH distribution, basal area, crown health, tree size, species and tree bark characteristics

Method

may be in line with:

- sampling undertaken
- forest type
- species
- stand history
- organisational requirements or procedures

Appropriate personnel may include:

- supervisors
- management
- colleagues
- clients
- relevant groups
- contractors

Relevant plans may include:

- tending plans
- harvesting plans
- organisational marketing and strategic plans
- plans or regulations relating to chemical use and environmental requirements

RANGE STATEMENT

Measured may include:

- girth
- height
- number
- spread

Overwood treatment may be:

- expressed as a number of trees per hectare removed

and may include:

- felling
- poisoning
- sapringing
- ringbarking

Approvals

may be required by:

- environmental bodies
- local, state or territory, and federal government bodies and agencies
- long-term budget processes

Communication *may include:*

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Resources may include:

- time
- people
- materials
- chemicals

Equipment may include:

- geographic information systems
- aerial photography
- hand tools
- mechanical equipment, such as chainsaw and harvesting equipment

Authorisations may include:

- permits
- approvals
- licences relating to neighbouring sites or properties

RANGE STATEMENT

- Documentation requirements:**
- hours of operation
 - use and application of chemicals
 - the environment
- may be required where chemical agents are used for treatment
- and may include changes to:
- prescriptions
 - supplementary notifications and approvals
 - reports
 - amendments to maps and plans
- Monitoring points:**
- may be time-based and frequency-based
- and may include:
- stream monitoring
 - mechanical damage to trees
- Checked may include:**
- following OHS, organisational, legislative and environmental regulations, procedures, practices and precautions
 - adherence to site environmental imperatives
 - specifications, quality and performance targets
 - documentation completed and submitted as required
- Information**
- may be:
- written
 - printed
 - verbal
 - electronic
 - visually displayed
- may include:
- aerial photographs
 - history of forest
 - visual observation
 - local regulations and by-laws
- Records and reports may include:**
- difficulties or issues faced during planning and implementing the program
 - forest assessments
 - recommendations for future work
 - results
 - costs

RANGE STATEMENT

- data analysis

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM3207B Coordinate stem improvement

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan, implement and monitor the development of preferred stem shape or number of branches, using techniques such as pruning and pest control

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM3207A Coordinate stem improvement

Application of the Unit

Application of the unit

The unit involves coordinating stem improvement in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Plan stem improvements

- 1.1. Applicable ***occupational health and safety (OHS), environmental, legislative and organisational requirements*** relevant to coordinating ***stem improvement*** are identified and followed
- 1.2. Site ***environmental requirements*** are identified and followed
- 1.3. Relevant ***information*** is obtained, reviewed and analysed for impact on stem improvement planning
- 1.4. ***Methods*** of intervention are identified and selected in line with required product
- 1.5. Measurable performance indicators, specifications and targets are determined and documented
- 1.6. Required ***approvals*** are identified, sought and obtained from relevant authorities
- 1.7. Stem improvement ***plan*** and its performance indicators are clearly documented and communicated to ***appropriate personnel***

2. Implement and monitor stem improvement

- 2.1. Resources required for stem improvement activities are coordinated and scheduled, and required ***documentation*** is completed clearly and accurately
- 2.2. Schedule for the site is organised and relevant ***individuals, bodies and groups*** are consulted as required using appropriate interpersonal techniques

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|----------------------------|--|
| 3. Review stem improvement | <p>2.3. Stem improvement plan is implemented and monitored to ensure stem health and growth are maintained</p> <p>2.4. Systematic <i>checks</i> are carried out to ensure compliance requirements relevant to stem improvement activities are adhered to</p> <p>2.5. Adjustments to stem improvement activities are made as required and communicated to appropriate personnel</p> <p>2.6. Potential and existing risks and <i>hazards</i> in the work area are identified and controlled</p> <p>2.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> <p>2.8. <i>Limitations</i> are identified and assistance is sought as required in line with workplace procedures</p> <p>3.1. Data and documentation from stem improvement are assessed and evaluated to confirm techniques, methodologies and budgets are in line with the plan</p> <p>3.2. Issues and impediments to stem improvement activities and program costs are identified and documented</p> <p>3.3. Cost benefit analysis is prepared and recommendations are made, based on the analysis of data and identified issues</p> <p>3.4. Results of stem improvement are clearly communicated and disseminated to appropriate personnel</p> <p>3.5. Stem improvement processes are <i>recorded and reported</i> to appropriate personnel</p> |
|----------------------------|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; supervise operational staff and contractors to achieve specific outcomes; recognise common diseases, pests and nutritional deficiencies; schedule

REQUIRED SKILLS AND KNOWLEDGE

forest operations; prune target species appropriately

- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others; present information orally and in writing to a wide range of individuals and groups
- Literacy skills sufficient to record and report workplace information; maintain documentation; interpret, assess and extract critical information from sources; collate and assess information against specified criteria; interpret and act on written information, including maps, plans, reports and numerical data
- Numeracy skills sufficient to evaluate numerical and financial data
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for coordinating stem improvement
- Environmental protection requirements, including the safe disposal of waste material and the safe use and storage of chemicals
- Organisational and site standards, requirements, policies and procedures for coordinating stem improvement
- Environmental risks and hazards
- Pruning techniques for target species
- Recognition and identification of a range of species
- Plant identification sources
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and supervise the implementation of stem improvement activities within applicable environmental, legislative and organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to coordinating stem improvement
- following organisational policies and procedures relevant to coordinating stem improvement
- identifying measurable performance indicators, specifications and targets and developing a stem improvement plan within specified budgetary guidelines
- identifying and recommending methods and strategies to manage stem quality and growth
- monitoring stem improvement operation, ensuring relevant legal, OHS and environmental requirements are followed
- documenting results from stem improvement activities and preparing a report for dissemination to relevant personnel

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Stem improvement

may be used to encourage tree growth to suit marketing requirements

Environmental requirements

may include:

- hygiene of the area
- relevant commonwealth, state or territory and local legislation and regulations

Information

may include:

- organisational strategic and tending plans
- appropriate regulations

Methods

may include:

- pruning using mechanical or hand tools
- using chemicals or biological agents
- recycling pruned material
- disposing of pruned material that cannot be recycled due to chemicals or biological agents used

Approvals

may be required where:

- use of chemicals or biological agents is intended
- browsing control techniques may impact on neighbouring properties

Plan

may detail:

- organisational terminology
- guidelines and budgets
- policies and timelines
- internal memos
- resources (people, material and equipment)
- tools (chainsaws)

Appropriate personnel

may include:

- operational personnel
- colleagues
- clients
- line management
- external authorities
- agencies

RANGE STATEMENT

Documentation

may be required where:

- there is use of chemical or biological agents
- operation is to be contracted out
- contractors
- clients
- peers
- local, federal, state or territory government agencies/bodies

Individuals, bodies and groups

may include:

Checks may include:

ensuring:

- relevant organisational OHS procedures, practices, policies and precautions are observed and followed
- site environmental requirements follow relevant commonwealth, state or territory and local legislation and regulations
- performance indicators, targets and specifications are met
- quantity, cost and provenances collected are in line with plan specifications
- required organisational documentation is completed clearly and accurately

Hazards may include:

- use of machinery
- use of chemicals or biological agents
- adverse weather conditions
- adverse terrain conditions

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Limitations may relate to:

- job role and responsibilities
- own competency level
- industry requirements
- own understanding of risk identification processes

RANGE STATEMENT

Records and reports may include:

- own interpretation of legislation, regulations and procedures
- OHS and environmental requirements
- difficulties or issues faced
- results
- costs
- data analysis
- recommendations for future work

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM3209B Construct and maintain forest roads and tracks

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to plan, construct and maintain roads and tracks in a forest environment. The unit includes monitoring road or track conditions and coordinating maintenance work

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM3209A Construct and maintain forest roads and tracks

Application of the Unit

Application of the unit The unit involves constructing and maintaining forest roads and tracks in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Plan road or track

- 1.1. Applicable *occupational health and safety* (OHS), *environmental*, *legislative* and *organisational requirements* relevant to constructing and maintaining forest roads and tracks are identified and followed
- 1.2. *Topography* details are obtained and assessed in relation to *environmental management considerations*
- 1.3. *Construction requirements* are identified and checked with *appropriate personnel*
- 1.4. Track and road entry points are located to planned construction requirements and provide vehicle and equipment access, turning and loading space
- 1.5. Road line is *established* and *obstacles* are removed in line with plans, site procedures and environmental requirements
- 1.6. *Extraction* methods and *resources* are identified and obtained in line with site procedures
- 1.7. Forest road or track construction and maintenance plan is prepared in line with site procedures and environmental requirements
- 1.8. *Communication* with others is established and maintained in line with OHS requirements

ELEMENT	PERFORMANCE CRITERIA
2. Construct road or track	<p>2.1. Soil is removed to establish base of suitable width, slope and stability in line with OHS and environmental requirements and site procedures</p> <p>2.2. Water crossing points and drains are established and provided in line with environmental requirements and site procedures</p> <p>2.3. Intersection points are prepared to provide suitable entry and exit levels and control water flow</p> <p>2.4. Pipes or cords are placed and correctly backfilled and compacted in line with predicted water volume and site procedures</p> <p>2.5. Road or track base and surface material is transferred, spread and compacted to meet planned road or track design</p> <p>2.6. Equipment is stabilised, controlled and manoeuvred to compact and stabilise adjacent soil during construction</p> <p>2.7. Road or track surface is cut and prepared suitable for support, effects of tree or log movement, manoeuvring and traction of equipment</p>
3. Maintain road or track	<p>3.1. Condition of road or track is monitored in relation to volume of traffic and expected future requirements in line with OHS and environmental requirements</p> <p>3.2. Specific damage likely to lead to safety or environmental issues is identified and repaired or reported immediately</p> <p>3.3. Maintenance is planned and carried out with minimal disruption to other work activities</p> <p>3.4. Areas of consistent damage are redesigned and remade with assistance from appropriate personnel</p> <p>3.5. Road or track construction and maintenance processes are recorded and reported to appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; identify and extract logs and other obstacles; use extraction methods
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for constructing and maintaining forest roads and tracks
- Environmental protection requirements, including the safe disposal of waste material, the cleaning of plant, tools and equipment, and the minimisation of environmental impact, carbon emissions and noise
- Organisational and site standards, requirements, policies and procedures for constructing and maintaining forest roads and tracks
- Environmental risks and hazards
- Using energy effectively and efficiently
- Logging and harvesting operations
- Log extraction methods
- Road transport equipment requirements and capabilities in forest operations
- Ground water behaviour
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently construct and maintain forest roads and tracks in line with set plans and budget

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to constructing and maintaining forest roads and tracks
- following organisational policies and procedures relevant to constructing and maintaining forest roads and tracks
- constructing and maintaining forest roads and tracks in line with the work order and within prescribed organisational tolerances
- establishing water crossings and drains, including pipes, cords and culverts as required
- coordinating the maintenance of forest roads and tracks, including assessing damage and reporting hazards or areas requiring redesign

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Topography

is a map of the designated area showing terrain levels

Environmental management considerations may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards
- obstacles

Construction requirements may include:

- data relating to road requirements and restrictions
- lifting equipment
- transport equipment
- maximum road loads
- likely weather conditions
- expected timeframes
- survey locations and requirements
- water courses
- location of log landings
- road entry points
- crossing or entry points for other roads and tracks
- budget

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues and managers

RANGE STATEMENT

- Established** may include:
 - contractors
 - line-of-site
 - pegging and marking trees
 - clearing and removing trees and obstacles
- Obstacles** may include:
 - stumps
 - unrecoverable trees
- Extraction** is to include:
 - methods of removing log from the work site with mechanical equipment and cables, considering site conditions and specific log location
 - an order that minimises downtime and risk of snags, breakages and hang ups
- Resources** may include:
 - equipment
 - personnel
 - budget
 - time
- Communication** may include:
 - verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Removed** may include:
 - removing, dumping and storing soil
 - considering environmental requirements and consequences in relation to removing, dumping and storing soil
- Water crossing points:**
 - may be established where depth of drainage becomes excessive or natural water courses occur
 - may include use of a culvert or cording in line with volume of predicted crossing water
- Base and surface material** may include:
 - crushed rock and sand over a range of sizes and materials typically used for road and track construction
- Equipment** may be wheeled or tracked and include:
 - dozer
 - front end loader

RANGE STATEMENT

- skidder or grader using bucket or blade attachments
- Records and reports** may include:
- landing and snig track design and development operations
 - extraction methods
 - hazards and incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM3210B Patrol forest

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to patrol a forest estate and inspect visitor site facilities. The unit includes identifying and assessing risks and hazards, and collecting evidence in line with prescribed formats and procedures

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM3210A Patrol forest

Application of the Unit

Application of the unit The unit involves patrolling in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for patrol	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to patrolling a forest are identified and followed</p> <p>1.2. <i>Patrol requirements</i> are identified in line with work instructions</p> <p>1.3. Necessary <i>equipment</i> is accessed, prepared and stored in patrol vehicle in line with work instructions and organisational requirements</p> <p>1.4. <i>Communication links</i> are established and <i>appropriate personnel</i> notified of intended activities</p> <p>1.5. <i>Contingency plans</i> are made and communicated to appropriate personnel in line with organisational environmental requirements</p>
2. Carry out patrol	<p>2.1. Patrol is conducted in line with work instructions, and environmental, heritage and OHS requirements</p> <p>2.2. Risks and potential consequences to staff, the public and <i>forest estate</i> are identified and assessed</p> <p>2.3. Control measures are promptly implemented in line with OHS requirements and organisational procedures</p> <p>2.4. Appropriate follow-up action is implemented and documented in line with organisational procedures</p>
3. Respond to complaints or breaches	<p>3.1. Complaints or <i>breaches of legislation</i> are assessed for further action in line with OHS, environmental, heritage and organisational requirements</p> <p>3.2. <i>Evidence</i> is collected and documented in line with organisational and legislative requirements and</p>

ELEMENT**PERFORMANCE CRITERIA**

formats

3.3. Appropriate follow-up action is taken in line with organisational requirements

3.4. Forest patrol outcomes are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, including communications equipment; assess risks and hazardous situations; demonstrate time and project management
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others; use appropriate questioning techniques to gather verbal evidence
- Literacy skills sufficient to collect and document evidence; prepare a range of reports, documentation and submissions where precise meaning is required; read and interpret maps; record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for patrolling a forest
- Environmental protection requirements, including the safe disposal of waste material, minimising environmental impact, and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for patrolling a forest
- Environmental risks and hazards
- Types, use and maintenance of communications equipment
- Types of maps

REQUIRED SKILLS AND KNOWLEDGE

- Geography of patrol area
- Formats, procedures and legislative requirements for collecting and documenting evidence
- Typical complaints and breaches, and appropriate response procedures and follow-up actions
- Organisational public relations guidelines
- Role and interrelationship of government agencies controlling patrol area
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently carry out a patrol and respond to complaints and breaches of legislation

Critical aspects for assessment and evidence required to demonstrate competency in this unit

the evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to patrolling a forest
- following organisational policies and procedures relevant to patrolling a forest
- following applicable licensing or certification requirements
- preparing for a patrol ensuring communication links are established, appropriate notification of intended

EVIDENCE GUIDE

- patrol route, and area and contingency plans
 - carrying out a patrol, identifying and assessing risks and hazards, and demonstrating appropriate response procedures
 - responding to complaints and breaches of legislation using appropriate questioning techniques, and documentation procedures and formats to collect evidence
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment

EVIDENCE GUIDE

of other units of competency

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures

Environmental requirements

RANGE STATEMENT

may include:

- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Patrol requirements may include:

- defining routes and patrol area
- determining and minimising potential impact on the environment

Equipment may include:

- maps
- forms and documents
- communications equipment, such as telephones and radios (hand-held or installed in vehicles)

Communication links may

- base and other work centres

RANGE STATEMENT

include:

- supervisors
- co-workers
- appropriate authorities

Appropriate personnel may include:

- supervisors
- co-workers
- appropriate authorities

Contingency plans may include:

- search and rescue of lost members of the public and colleagues
- recovery of vehicles
- clearing of roads
- evacuation plans
- bush fire control assistance to emergency services or other government agencies
- administration of first aid

Forest estate may include:

- all areas within and immediately adjacent to the forest boundaries
- enterprise assets, such as offices and accommodation
- structures, such as fences, roads and forest products
- visitor sites, including developed and undeveloped camping
- bush camping areas
- day use areas
- other recreational activity areas

Breaches of legislation may include:

- unauthorised use of roads to which public access is restricted
- unauthorised use of firearms by members of the public
- damage or theft of the forest estate by members of the public
- illegal activities by members of the public, particularly in campsites

Evidence may include:

- physical
- written
- verbal

Records and reports may include:

- evidence collected and clearly written
- accurate and complete reports in a format that may be presented in court

and may be:

- manual

RANGE STATEMENT

- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM3211B Manage coppice stems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to manage coppice stem development in the regeneration of broadleaf forests by allowing coppice stems to grow from ground level stumps (stools). The unit includes thinning to promote growth of stronger stems and to achieve a higher yield rate

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM3211A Manage coppice stems

Application of the Unit

Application of the unit

The unit involves managing coppice stems in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for coppice management	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to managing coppice stems are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>stumps</i> to grow <i>coppice</i> are identified and assessed for safe working conditions</p> <p>1.4. <i>Equipment</i> appropriate to work requirements is selected and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Coppice activities are planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Develop coppice stems	<p>2.1. <i>Environmental conditions</i> are assessed and used to plan the coppice development of each tree stump</p> <p>2.2. Chainsaw operators are directed to cut tree stumps at ground level to form <i>stools</i></p> <p>2.3. Stools are cleared of <i>debris</i> and allowed to rest and sprout coppice</p> <p>2.4. Debris is recycled in line with site procedures and environmental requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	2.5. Coupe is protected from wildlife and grazing animals during coppice development
	2.6. <i>Standard seedlings</i> are removed or left in line with the <i>coppice management plan</i> used
	2.7. Stools are regularly assessed to measure and gauge the amount of coppice growth
3. Undertake thinning	3.1. Coppice stems are assessed in line with the coppice management plan to identify stronger stems and how many stems to leave
	3.2. Weaker or smaller coppice stems are removed by hand or mechanically
	3.3. <i>Thinning</i> is regularly undertaken to control regrowth and promote the growth of retained coppice stems
	3.4. Thinning of more mature coppice forests is directed to prepare for <i>harvesting</i> activities
	3.5. Thinned material is recycled in line with site procedures and environmental requirements
	3.6. Coppice management process is <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely manage coppice stems
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing coppice stems
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for managing coppice stems
- Environmental risks and hazards
- Procedures for minimising environmental impact
- Characteristics of trees and timber defects
- Coppice stem development
- Regeneration methods
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently manage coppice stems in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing coppice stems

EVIDENCE GUIDE

Context of and specific resources for assessment

- following organisational policies and procedures relevant to managing coppice stems
- managing coppice stems to promote forest regeneration and bring about high volume yields
- conducting thinning operations of coppice stems
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate

EVIDENCE GUIDE

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth,

RANGE STATEMENT

state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements may include:

Work order is to include:

- instructions for coppice stem management for the work site and may include:
 - type
 - size
 - length
 - quantity and grade

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

RANGE STATEMENT

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Stumps

are the remaining stumps after felling has occurred in harvesting operations; stump height varies between half a metre and two metres

Coppice:

- is the new growth that shoots from a stump or stool after harvesting has occurred
- is used as an alternative to seeding or seedling propagation to provide short rotation for pulpwood of existing species
- forests are renowned for providing a fast return to a flora and fauna friendly biodiversity

Equipment may include:

- thinning equipment

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Environmental conditions may include:

- ground growth
- ground slope
- gullies
- water courses
- seed trees
- habitat trees
- ground hazards and obstacles

Stools

are stumps after they have been cut down to height equivalent or as close as is practical to ground level

Debris is to include:

- forest waste
- branches

RANGE STATEMENT

- bracken or rubbish
- Standard seedlings** are to include:
- new growth that sprouts as a result of natural seeding or planted seedlings
- Coppice management plan** may include:
- coppice plans that only manage coppice growth
 - coppice and standard plans, which include regulated growth of standard seedlings to complement the coppice growth
- Thinning** is the process of removing weak, small or surplus coppice stems to promote the growth of the remaining stems
- Harvesting** is the method of cutting and extracting trees and timber from designated areas
- Records and reports** may include:
- tree type
 - size
 - height
 - diameter
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM3212 Fall trees manually (intermediate)

Modification History

Version	Detail
1	Unit replaces FPIFGM3204A Fall trees manually (intermediate)

Unit Descriptor

This unit describes the outcomes required to assess, plan and safely carry out manual tree-felling operations using a chainsaw in a non-production environment. This unit covers the felling procedures for trees with a level of complexity that requires significant tree assessment and practical felling skills. Persons competent in this unit should be able to effectively fell most trees with the exception of the very large and those that have significant defects and/or characteristics causing excessive complexity.

Techniques for trees with a diameter greater than the bar length would generally be regarded as within the scope of this unit.

Application of the Unit

This unit involves felling trees in a non-production environment. It applies to a forest, rural and community environment.

These skills and knowledge are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Licensing, legislative, regulatory or certification requirements may apply in various jurisdictions.

Pre-Requisites

Not applicable

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for felling	<p>1.1 Identify and comply with applicable <i>occupational health and safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to felling trees</p> <p>1.2 Identify and adhere to site <i>environmental protection measures</i> according to relevant legislation and regulations</p> <p>1.3 Review and check <i>job requirements</i> with <i>appropriate personnel</i> as required</p> <p>1.4 Sharpen and adjust chainsaw or change components according to manufacturer recommendations</p> <p>1.5 Assess tree and determine felling requirements</p> <p>1.6 Identify and control potential and existing risks and <i>hazards</i> in the work area</p> <p>1.7 Identify trees to be retained and felled</p> <p>1.8 Establish and maintain <i>communication</i> with others according to OHS requirements</p>
2. Visually assess site conditions and surroundings	<p>2.1 Identify and comply with site environmental concerns according to relevant federal, state or territory legislation and local regulations</p> <p>2.2 Review terrain and slope to determine if they add complexity to the operation</p> <p>2.3 Maintain awareness of <i>environmental conditions</i> and other personnel activity in the work area and modify felling activity where required</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4 Assess general factors affecting felling requirements and detect and control specific forest or site risks and hazards
3. Assess tree and plan felling	<p>3.1 Visually assess tree for felling characteristics</p> <p>3.2 Select <i>tools and equipment</i> appropriate to work requirements and check them for operational effectiveness according to manufacturer recommendations</p> <p>3.3 Identify trees to be felled for size, significant defects and any characteristics causing excessive complexity</p> <p>3.4 Assess and progressively plan tree-felling sequence for individual trees</p> <p>3.5 Assess and check required falling direction and possible deviation</p> <p>3.6 Plan sequence of cuts to fell tree according to standard felling procedures</p> <p>3.7 Select suitable escape route</p> <p>3.8 Assess <i>limitations</i> of own skills in safely felling trees, identify <i>trees considered outside own skill level</i> and seek assistance from appropriate personnel where required</p> <p>3.9 Monitor and exclude location and activity of other personnel on the work site</p>
4. Apply tree-felling techniques	<p>4.1 Select suitable escape route and clear of growth and other obstacles according to environmental care principles and statutory requirements</p> <p>4.2 Fell individual trees using planned <i>techniques</i> according to site requirements, at a safe distance from other personnel in the work area</p> <p>4.3 Adjust cutting technique in response to movement and condition of tree</p> <p>4.4 Use planned escape route when tree starts to fall and monitor the fall and movement of tree on ground until determined stable</p> <p>4.5 Identify procedures for removal of trees that are hung-up</p> <p>4.6 Detect, rectify and report blunt or damaged saw chain according to workplace procedures</p> <p>4.7 Monitor chainsaw for operational effectiveness and record and report faults, malfunctions and problems</p>

ELEMENT	PERFORMANCE CRITERIA
	according to workplace procedures

Required Skills and Knowledge

Required skills:

- Technical skills to:
 - use and maintain relevant tools and equipment
 - safely operate and maintain a chainsaw
 - assess, plan and carry out tree-felling operations appropriate to site conditions
- Communication skills to:
 - use appropriate communication and interpersonal techniques and methods with colleagues and others
 - use hand signals with other operators to maintain effective and safe tree felling
- Literacy skills to:
 - locate and report information
 - interpret, apply and convey information in written, diagrammatic and/or verbal form
- Numeracy skills to:
 - estimate tree height
 - calculate product mass and determine tree fall zone
 - measure tree length and diameter
- Problem-solving skills to:
 - review and identify work requirements
 - recognise own limitations in conditions and trees for felling
 - identify problems and equipment faults and demonstrate appropriate response procedures
 - apply safe work practices, including using personal protective equipment (PPE) and controlling hazards
 - comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for felling trees manually
- Planning and organising skills to plan work to site requirements

Required knowledge:

- Basic knowledge of applicable federal, state or territory legislation, regulations, standards and codes of practice relevant to the full range of processes for felling trees manually
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for felling trees manually
- Types of tools and equipment for felling trees manually, and the procedures for their safe use, operation and maintenance
- Problem identification and resolution strategies and common fault-finding techniques
- Established communication channels and protocols
- Procedures for identifying and evaluating structural defects and stresses in trees
- Types and purposes of a range of cuts to fell trees
- Operational principles and limitations of a chainsaw
- Procedures for recording and reporting workplace information
- Chainsaw product specifications

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can assess, plan and safely and efficiently operate chainsaw equipment to manually fell trees at the intermediate level in a forest environment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- compliance with applicable federal, state or territory legislative and regulatory requirements and codes of practice relevant to felling trees manually at an intermediate level
- compliance with organisational policies and procedures relevant to felling trees manually at an intermediate level
- compliance with applicable licensing and certification

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

requirements

- communicating effectively and working safely with others in the work area
- Identifying and describe key features of structural defects and stresses in trees and the impact on
 - conducting an assessment of a range of intermediate trees, and planning and safely felling trees without damage to personnel, equipment and surrounding environment
 - planning felling sequence and preparing surroundings including escape route
- felling a range of intermediate trees using a range of cuts safely without damage to personnel, equipment and surrounding environment
- preparing, operating and maintaining chainsaw equipment and other felling equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory requirements and Australian standards
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

- questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the essential underpinning knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
 - Where the participant has a disability, reasonable adjustment may be applied during assessment
 - Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below.

- OHS requirements:**
- are to be in accordance with applicable federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - PPE and clothing
 - safety equipment
 - first aid equipment
 - firefighting equipment
 - hazard and risk control

- fatigue management
- appropriate signage
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to fire
- techniques for manual handling, including shifting, lifting and carrying

- Legislative requirements:**
- are to be in accordance with applicable federal, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - award and organisational agreements
 - industrial relations
 - Australian standards
 - confidentiality and privacy
 - OHS
 - the environment
 - native vegetation
 - equal employment opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care

Organisational requirements may include:

- legal compliance documentation
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements, including waste disposal, recycling and re-use guidelines

Trees typical to the scope of this unit may include the

- lean and weight distribution, which can be assessed and readily adapted to falling direction with the use

following characteristics:

- of wedges and/or control with hinge-wood
- various dimensions relative to local forest size distribution
- limited visible damage or defect
- species prone to free splitting and adverse reactions during felling
- a crown that contains dead or broken material, entanglement or malformation and is visible for assessment and monitoring
- single or multi-stems
- diameter of tree greater than chainsaw bar length
- grown on terrain and slope that can add complexity to the operation

Environmental protection measures may include action to limit the impact to:

- native vegetation
- soil and water
- heritage and archeological artefacts
- flora and fauna
- geomorphologic features
- landscape
- external site pollution
- recreational opportunities
- regeneration opportunities

Job requirements may include:

- information and instructions relevant to tree-felling operations, including processing location details and trees to be felled and retained
- general environmental requirements
- site plan and environmental features

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- managers

Hazards may include:

- uneven or unstable terrain
- unsafe trees
- fires
- overhead and underground services
- excavations

- traffic
- structures
- hazardous materials
- insects and animals
- other personnel and machinery

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening and questioning to clarify and confirm understanding
- electronic communication devices

Environmental conditions may relate to:

- ground growth
- canopy
- general tree lean
- ground slope
- ground hazards
- wind speed and direction

Tools and equipment may include:

- warning signs
- chainsaw and components
- PPE and clothing
- first aid equipment
- maintenance requirements
- support tools

Limitations may relate to:

- job role and responsibilities
- own competency level
- industry requirements
- own understanding of risk identification processes
- own interpretation of legislation, regulations and procedures
- complying with OHS requirements

Trees considered outside own skill level include:

- trees that contain hazards and are deemed unsafe
- trees that are considered to be in the advanced category
- trees where cuts made may lead to loss of control of

tree in falling

Techniques:

- will include:
 - scarf cutting
 - back cutting to provide hinge-wood and maintain control of tree
- may include:
 - use of wedges to assist in controlling falling direction

Unit Sector(s)

Forest Growing and Management

Competency field

Competency field Forest Growing and Management

FPIFGM3213 Fall trees manually (advanced)

Modification History

Version	Detail
1	Unit replaces FPIFGM3205A Fall trees manually (advanced)

Unit Descriptor

This unit describes the outcomes required to assess, plan and safely carry out manual tree-felling operations using a chainsaw in a non-production environment. The unit covers the procedures for felling trees of any size, species and condition that the faller has deemed safe to fell.

Application of the Unit

This unit involves felling trees in a non-production environment, including forest, rural and community environments.

These skills and knowledge are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Licensing, legislative, regulatory or certification requirements may apply in various jurisdictions.

Pre-Requisites

Not Applicable

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for felling

1.1 Identify and comply with *applicable occupational health and safety* (OHS), environmental, *legislative* and *organisational requirements* relevant to felling trees

1.2 Identify and adhere to site *environmental protection measures* according to relevant legislation and regulations

1.3 Review *job requirements* and check as required with *appropriate personnel*

1.4 Select *tools and equipment* appropriate to work requirements and check them for operational effectiveness according to manufacturer recommendations

1.5 Sharpen and adjust chainsaw or change components according to manufacturer recommendations

1.6 Identify and control potential and existing risks and *hazards* in the work area

1.7 Identify trees to be felled as being safe to fell

1.8 Assess and progressively plan tree-felling sequence for individual trees

1.9 Establish and maintain *communication* with others according to OHS requirements

2. Visually assess site conditions and surroundings

2.1 Identify and comply with site environmental concerns according to relevant federal, state or territory legislation and local regulations

2.2 Review terrain and slope to determine if they add significant complexity to the operation

2.3 Maintain awareness of *environmental conditions* and

ELEMENT	PERFORMANCE CRITERIA
	<p>other personnel activity in the work area and modify felling activity where required</p> <p>2.4 Assess general factors affecting felling requirements and detect and control specific forest or site risks and hazards</p>
3. Assess tree and plan felling	<p>3.1 Locate and visually assess tree for felling characteristics</p> <p>3.2 Assess and check required falling direction and possible deviation</p> <p>3.3 Plan sequence of cuts to fell tree according to standard felling procedures</p> <p>3.4 Identify <i>limitations</i> in own skills in safely felling trees, assess <i>trees considered outside own skill</i> level and seek assistance from appropriate personnel where required</p> <p>3.5 Monitor and exclude location and activity of other personnel on the work site</p>
4. Apply tree-felling techniques	<p>4.1 Select suitable escape route and clear it of growth and other obstacles according to environmental care principles and statutory requirements</p> <p>4.2 Fell individual trees using planned <i>techniques</i> according to site requirements, at a safe distance from other personnel in the work area</p> <p>4.3 Adjust cutting technique in response to movement and condition of tree</p> <p>4.4 Use planned escape route when tree starts to fall and monitor the fall and movement of tree on ground until determined stable</p> <p>4.5 Identify procedures for removal of trees that are hung-up</p> <p>4.6 Detect, rectify and report blunt or damaged saw chain according to workplace procedures</p> <p>4.7 Monitor chainsaw for operational effectiveness and record and report faults, malfunctions and problems according to workplace procedures</p>

Required Skills and Knowledge

Required skills:

- Technical skills to:
 - use and maintain relevant tools and equipment
 - safely operate and maintain a chainsaw
 - assess, plan and carry out tree-felling operations appropriate to site conditions
- Communication skills to:
 - use appropriate communication and interpersonal techniques and methods with colleagues and others
 - use hand signals with other operators to maintain effective and safe tree felling
- Literacy skills to:
 - locate and report information
 - interpret, apply and convey information in written, diagrammatic and/or verbal form
- Numeracy skills to:
 - estimate tree height
 - calculate product mass and determine tree fall zone
 - measure tree length and diameter
- Problem-solving skills to:
 - review and identify work requirements
 - recognise own limitations in conditions and trees for felling
 - identify problems and equipment faults and demonstrate appropriate response procedures
 - apply safe work practices, including using personal protective equipment (PPE) and controlling hazards
 - comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for felling trees manually
- Planning and organising skills to work to site requirements

Required knowledge:

- Basic knowledge of applicable federal, state or territory legislation, regulations, standards and codes of practice relevant to the full range of processes for felling trees manually
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for felling trees manually
- Types of tools and equipment for felling trees manually, and the procedures for their safe use, operation and maintenance
- Problem identification and resolution strategies and common fault-finding techniques

- Established communication channels and protocols
- Procedures for identifying and evaluating structural defects in trees
- Types and purposes of a range of cuts to fell trees
- Operational principles and limitations of a chainsaw
- Procedures for recording and reporting workplace information
- Fire protocols
- Chainsaw product specifications

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can assess, plan and safely and efficiently operate chainsaw equipment to manually fell trees at an advanced level in a forest environment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- compliance with applicable federal, state or territory legislative and regulatory requirements and codes of practice relevant to felling trees manually at an advanced level
- compliance with applicable licensing or certification requirements relevant to felling trees manually at an advanced level
- effective communication and safe working practices, including maintaining an awareness of other personnel activity in the work area
- Identifying and describe key features of structural defects and stresses in trees and the impact on
 - conducting a tree assessment, and planning and undertaking advanced tree felling within the range of variables for trees and conditions
 - planning felling sequence for individual trees and preparing surroundings including escape route
- felling a range of advanced trees using a range of cuts safely without damage to personnel, equipment and surrounding environment
- selecting, preparing and maintaining appropriate tools and

equipment and recognising faults, problems and malfunctions

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory requirements and Australian standards
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the essential underpinning knowledge
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task

should not be higher than those of the work role

Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below.

- OHS requirements:**
- are to be in accordance with applicable federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - PPE and clothing
 - safety equipment
 - first aid equipment
 - firefighting equipment
 - hazard and risk control
 - fatigue management
 - appropriate signage
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to fire
 - techniques for manual handling, including shifting, lifting and carrying
- Legislative requirements:**
- are to be in accordance with applicable federal, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - award and organisational agreements
 - industrial relations
 - Australian standards
 - confidentiality and privacy
 - OHS
 - the environment
 - native vegetation
 - equal employment opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care

- heritage and traditional landowner issues

Organisational requirements may include:

- legal compliance documentation
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements, including waste disposal, recycling and re-use guidelines

Trees typical to the scope of this unit may include the following characteristics:

- lean and weight distribution that adds significant complexity yet can be assessed and adapted to site requirements
- larger dimensions relative to local forest size distribution
- substantial lean
- damage or defect that requires complex felling techniques
- multi-legged, hollow butts, culls and stags
- species prone to free splitting and adverse reactions during felling
- a crown that contains dead or broken material, entanglement or malformation and presents a hazardous and difficult situation for assessment, monitoring and safe felling
- single or complex multi-stems
- diameter of tree greater than chainsaw bar length
- grown on terrain and slope that can add significant complexity to the operation

Environmental protection measures may include:

- action to limit the impact to:
 - native vegetation
 - soil and water
 - heritage and archeological artefacts

- flora and fauna
- geomorphologic features
- landscape
- external site pollution
- recreational opportunities
- regeneration opportunities

Job requirements may include:

- information and instructions relevant to tree-felling operations, including processing location details and trees to be felled and retained
- general environmental requirements
- site plan and environmental features

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- managers

Tools and equipment may include:

- warning signs
- chainsaw and components
- PPE and clothing
- first aid equipment
- maintenance requirements
- support tools

Hazards may include:

- uneven and unstable terrain
- unsafe trees
- fires
- overhead and underground services
- excavations
- traffic
- structures
- hazardous materials
- insects and animals
- other personnel and machinery

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel

- active listening and questioning to clarify and confirm understanding
- electronic communication devices

Environmental conditions may relate to:

- ground growth
- canopy
- general tree lean
- ground slope
- ground hazards
- wind speed and direction

Limitations may relate to:

- job role and responsibilities
- own competency level
- industry requirements
- own understanding of risk identification processes
- own interpretation of legislation, regulations and procedures
- complying with OHS requirements

Trees considered outside own skill level include:

- trees that contain hazards and are deemed unsafe
- trees where cuts made may lead to loss of control of tree in felling

Techniques:

will include:

- scarf cutting
- back cutting to provide hinge-wood and maintain control of tree

may include:

- use of wedges to assist in controlling falling direction

Unit Sector(s)

Forest Growing and Management

Competency field

Competency field n/a

FPIFGM3214 Operate a four wheel drive in a towing situation

Modification History

Version	Detail
1	New unit

Unit Descriptor

This unit covers the techniques for towing and moving an object using a four-wheel drive (4x4) vehicle on roads and varied terrain. This may include towing a trailer, vehicle or equipment as well as moving logs or other loads.

Application of the Unit

This unit involves the operation of a 4x4 vehicle in a towing situation. The skills and knowledge required for competent workplace performance of towing are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Licensing, legislative, regulatory or certification requirements may apply in various jurisdictions.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1. Prepare 4x4 for towing
 - 1.1 Identify and follow *occupational health and safety* (OHS), environmental, legislative and *organisational requirements* relevant to operating in a towing situation
 - 1.2 Identify *type of object* to be towed and determine a suitable towing arrangement
 - 1.3 Identify equipment requirements and techniques to carry out the towing job
 - 1.4 Identify potential *hazards* that may be experienced at the towing site and during the towing operation
 - 1.5 Assess the towing activity for safety and security of persons, vehicles and property
 - 1.6 Check the *4x4 vehicle* to ensure equipment is appropriate to conditions and operationally effective in line with *manufacturer specifications*
2. Drive 4x4 towing a trailer
 - 2.1 Identify hazards and risk-management strategies associated with towing a trailer
 - 2.2 Safely couple and uncouple the trailer
 - 2.3 Secure load onto trailer
 - 2.4 Apply *risk-management strategies* while 4x4 vehicle is in operation and towing a trailer
 - 2.5 Demonstrate reversing a trailer uphill, around corners and in a straight line
 - 2.6 Use correct jack technique to change a trailer wheel
 - 2.7 Park and shut down 4x4 vehicle in line with manufacturer specifications and organisational requirements
3. Drive 4x4 moving an attached object
 - 3.1 Secure vehicle, equipment or object to be towed using appropriate *recovery devices*
 - 3.2 Apply risk-management strategies to a 4x4 vehicle operating in a towing situation
 - 3.3 Park and shut down 4x4 vehicle in line with manufacturer specifications and organisational requirements

- 4. Perform post-towing tasks
 - 4.1 Notify relevant personnel of trip completion
 - 4.2 Document activity in line with organisational procedures
 - 4.3 Apply maintenance procedures for allocated vehicle

Required Skills and Knowledge

Required skills:

- Technical skills to:
 - use and maintain relevant tools, machinery and equipment
 - perform minor routine servicing of vehicle
 - operate 4x4 vehicle in a towing situation
 - tow a trailer and move an attached object safely and according to organisational requirements
 - conserve energy with appropriate throttle use
- Communication skills to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills to:
 - record and report workplace information
 - complete documentation relating to towing a trailer or object
- Numeracy skills to measure, estimate and calculate:
 - time required to complete the task
 - force of the recovery operation
 - journey time, fuel consumption and other variables
- Problem-solving skills to identify problems and equipment faults
- Teamwork skills to work safely and collaboratively with others when towing a trailer or object
- Initiative and enterprise skills to:
 - apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
 - select and use personal protective equipment (PPE) in line with OHS requirements

Required knowledge:

- Applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes when towing a trailer or object
- Environmental protection requirements, including the safe disposal of waste material and the minimisation of carbon emissions and

environmental impact

- Environmental risks and hazards, organisational and site standards, requirements, policies and procedures for towing a trailer or object
- Road rules, regulations, permit and licence requirements of the relevant state or territory
- Operational knowledge of 4x4 vehicle, including controls, instruments and indicators, and their use
- 4x4 techniques
- Vehicle maintenance requirements
- Established communication channels and protocols
- Vehicle problem identification and resolution strategies, and common vehicle fault-finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information
- Characteristics, applications, capabilities and limitations of a 4x4 vehicle while towing a trailer or object
- Tools and equipment used when setting up and securing an object for towing
- Problems that may occur when setting up and securing an object for towing

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment A person who demonstrates competency in this unit must be able to provide evidence that they can tow a trailer or move an object using a 4x4 vehicle safely and in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of:

- following applicable federal, state or territory legislative and regulatory requirements and codes of practice relevant to operating a 4x4 vehicle towing a trailer or object
- following organisational policies and procedures relevant to operating a 4x4 in a towing situation
- assessing the safety of towing a trailer or object
- operating a 4x4 over a range of towing situations

Context of and specific resources for assessment

- Competency is assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an offsite context
- Assessment is to follow relevant regulatory requirements and Australian standards
- The following resources should be in place:
 - 4x4 vehicle
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other

circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

- are to be in line with federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - PPE and clothing
 - safety equipment
 - current first aid equipment in vehicle
 - current vehicle firefighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - techniques for manual handling, including shifting, lifting and carrying

Environmental

requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

- Legislative requirements:**
- are to be in line with federal, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - award and organisational agreements
 - industrial relations
 - Australian standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal employment opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care

- Organisational requirements** may include:
- legal compliance documentation
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements, including waste minimisation and disposal, recycling and re-use guidelines

- Type of object** may include:
- vehicle
 - water tank
 - log
 - rock
 - other object

- Hazards** may include:
- damage to vehicle
 - wet and iced terrain
 - flooded terrain
 - fire in vehicle

- fire at the scene
- faulty brakes
- leaking fuel
- faulty steering mechanism on vehicle
- animals and objects in vehicle path
- crocodiles and snakes in some areas
- windy or foggy sections of terrain
- steep slopes
- land slides
- tree limbs
- black ice
- trailers
- logs, rocks and other unexpected obstacles
- weather conditions
- slippery surfaces
- unsafe or damaged equipment
- spilt or leaking fuel or dangerous or hazardous goods or substances
- unsafe manual-lifting procedures

4x4 vehicle may include:

- manual and automatic four-wheel drive
- all-wheel drive

Manufacturer specifications may include:

- engine characteristics, including:
 - towing capacity of the vehicle
 - system's warning functions
 - four-wheel drive operation
 - radius of turning circle
 - safety procedures
 - instructions relating to engine air intake

Risk-management strategies may include:

- appropriate vehicle and trailer clearance
- appropriate approach and departure angles
- correct load management
- controlled braking methods using:
 - electric brakes
 - no brakes
 - override brakes
- adequate movement of the tow system
- making adjustment for extra length and width of

trailers, and their tendency to 'cut in' on corners and curves

- making appropriate adjustment in braking distance to compensate for the combined extra weight of vehicle and trailer
- driving vehicle to minimise trailer sway
- engaging a lower gear when travelling downhill with a trailer to give greater vehicle control and reduce load on brakes
- ensuring mirrors on both sides of towing vehicle are properly adjusted to give a clear view of vehicles approaching from the rear

Recovery devices may include:

- winches
- ropes
- cables
- slings
- pullers

Unit Sector(s)

Forest Growing and Management

FPIFGM3215 Perform complex 4x4 operations

Modification History

Version	Detail
1	Unit replaces FPIFGM3208B Perform complex 4x4 operations

Unit Descriptor

This unit describes the outcomes required to perform complex four-wheel drive (4x4) vehicle operations, including operations over rugged terrain and water crossings.

Application of the Unit

The unit involves performing complex 4x4 operations in a variety of work settings. The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions.

Pre-Requisites

Not Applicable

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the

unit of competency. required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1) 1. Prepare for 4x4 operations	<p>1.1 Identify and follow <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to performing complex 4x4 operations</p> <p>1.2 Identify and assess types of <i>water crossings</i> and <i>terrain</i> being accessed for safe operating conditions</p> <p>1.3 Check that <i>4x4 vehicle</i> being used is appropriate to conditions and operationally effective in line with manufacturer specifications</p> <p>1.4 Identify appropriate range of <i>personal protective equipment</i> (PPE) to be carried for the trip conditions</p> <p>1.5 Establish <i>communication</i> with others and choose required safety <i>mechanisms</i> in line with organisational requirements</p>
2. Prepare 4x4 vehicle for water crossing	<p>2.1 Place <i>cover</i> securely across the front of the vehicle when required by water depth</p> <p>2.2 Spray water repellent on electrical connectors, battery terminals and electrical components</p> <p>2.3 Check wheel hubs to engage/lock position</p> <p>2.4 Select appropriate gear for water crossing</p> <p>2.5 Allow vehicle to cool down before entering water to reduce ingress of water through seals</p>
3 Negotiate water crossing	<p>3.1 Assess <i>hazards and risks</i> associated with water crossings</p> <p>3.2 Determine safety of water crossing</p> <p>3.3 Establish and select <i>entry and exit points</i> for crossing in line with current flow and risk assessment</p> <p>3.4 Access water crossing to determine <i>depth of water</i> at intended crossing point</p> <p>3.5 Monitor the track continually to identify hazards and assess risks</p> <p>3.6 Perform water crossing by maintaining a constant bow wave</p>

ELEMENT	PERFORMANCE CRITERIA
4 Perform check of vehicle operations on completion of water crossing	<ul style="list-style-type: none">4.1 Drain water from 4x4 vehicle back into the water crossing4.2 Dry brakes off by gentle application while moving4.3 Check engine oils for contamination4.4 Check air cleaner elements for water intrusion and assess air intake operational effectiveness4.5 Check differential and gear box oils after prolonged periods in the water
5 Operate vehicle in rugged terrain	<ul style="list-style-type: none">5.1 Determine intended route prior to departure5.2 Inspect intended vehicle path prior to negotiation of rugged terrain5.3 Put contingency plan in place to deal with unexpected hazards5.4 Inspect, position and secure vehicle load to maximise traction for 4x4 driving5.5 Set <i>vehicle controls</i> in line with <i>manufacturer specifications</i> and for operation in the rugged terrain5.6 Negotiate terrain in line with requirements for <i>specific driving conditions</i>
6. Recover vehicle from loss of traction while ascending	<ul style="list-style-type: none">6.1 Determine intended route backwards6.2 Use correct brake and engine techniques to reverse vehicle6.3 Ensure vehicle comes to a safe stop
7. Perform post-trip tasks	<ul style="list-style-type: none">7.1 Notify relevant personnel of trip completion7.2 Document trip in line with organisational procedures7.3 Apply maintenance procedures for allocated vehicle

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Required skills:

- Technical skills to:
 - use and maintain relevant tools, machinery and equipment
 - assess depth and speed of water for safe crossing
 - safely perform water crossings
 - safely negotiate steep and uneven terrain
 - conserve vehicle energy with appropriate throttle use

- perform minor emergency repair of vehicle
- use correct techniques to safely stop and start on steep terrain
- Communication skills to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills to:
 - record and report workplace information
 - maintain documentation
- Numeracy skills to measure, estimate and calculate journey time, water depths, fuel consumption and other variables required to complete task
- Problem-solving skills to identify problems and equipment faults

Required knowledge:

- Applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for performing complex 4x4 operations
- Environmental protection requirements relating to 4x4 operation, speed, acceleration, and exiting water crossings that minimise carbon emissions and environmental impact
- Environmental risks and hazards relevant to complex 4x4 operations
- Organisational and site standards, requirements, policies and procedures for performing complex 4x4 operations
- Road rules, regulations, permit and licence requirements of the relevant state or territory
- Operational knowledge of 4x4 vehicle, including controls, instruments and indicators and their use
- Four-wheel drive techniques, including to safely cross water and operate 4x4 vehicle in rugged terrain
- Water-crossing methods, including associated hazards and risks
- Vehicle maintenance requirements following water crossings
- Established communication channels and protocols
- Vehicle problem identification and resolution strategies, and common vehicle fault-finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Organisational procedures for fleet management

Evidence Guide

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can perform 4x4 operations over water crossings and rugged terrain safely and in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable federal, state or territory legislative and regulatory requirements and codes of practice relevant to performing complex 4x4 operations
- following organisational policies and procedures relevant to performing complex 4x4 operations
- assessing the safety of planned water and rugged terrain crossings
- performing 4x4 operations over a range of rugged terrain and water crossings in line with the circumstances and 4x4 OHS operating regulations
- selecting correct gear/range to negotiate terrain
- engaging and disengaging freewheel hubs in line with driving conditions
- identifying safe locations for entry into and out of a waterway
- identifying and preparing supplies and resources appropriate to the journey

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory requirements and Australian standards
- The following resources should be in place:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit

- specifications and work instructions
- 4x4 vehicle

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on

the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

- are to be in line with federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - PPE and clothing
 - safety equipment
 - current first aid equipment in vehicle
 - current vehicle firefighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - techniques for manual handling, including shifting, lifting and carrying

Environmental requirements
may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

- are to be in line with federal, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - award and organisational agreements
 - industrial relations
 - Australian standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal employment opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care

Organisational requirements

- legal compliance documentation

may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements, including waste minimisation and disposal, recycling and re-use guidelines

Assessed may include:

- using local knowledge relating to types of water crossings, terrain or environmental issues
- estimation of water depth in the waterway by indicators
- local markings
- wading activities by a colleague or operator with suitable precautions taken that may include the ability to swim and use flotation devices or rope
- throwing rock into water to indicate depth

Water crossings may include:

- rivers
- streams
- creeks
- fords
- channels
- wash outs
- causeways
- flooded roads and terrain
- other shallow water bodies

Terrain may include:

- rough
- uneven
- slippery
- wet
- boggy

- sandy
- steep or hilly
- rock
- icy
- snow
- mud, including:
 - brown clay
 - black silt
 - salt pan mud
 - red
- hard ground
- water

4x4 vehicle may include:

- manual and automatic four-wheel drive
- all-wheel drive

Personal protective equipment may include:

- boots
- gloves
- eye protection
- long pants

Communication may include:

- verbal and non-verbal language
- radio protocols

Mechanisms may include:

- personal location beacon (PLB)
- flares
- markers
- phone
- radio
- V-Sheet

Cover may include:

- tarp
- blind
- plastic sheet
- fitted covers

Hazards and risks may include:

- speed of flowing water (moving at greater than one metre a second)
- underwater hazards

- debris in water
- rocks and other unexpected obstacles
- variable water depth and width of crossing
- risk of vehicle being swept down the waterway
- tidal influences
- wet and iced terrain
- flooded terrain
- fire in vehicle
- faulty brakes
- leaking fuel
- faulty steering mechanism on vehicle
- animals and objects in vehicle path
- crocodiles and snakes in some areas
- windy or foggy sections of terrain
- steep slopes
- slippery surfaces
- land slides
- tree limbs
- black ice
- trailers
- poor visibility

Entry and exit points must include:

- safe locations for entry into and out of a waterway, with shallow run-ins and exits and a firm base
- locations that minimise the impact on the environment

Depth of water is:

- the maximum height that may be crossed safely in line with vehicle manufacturer specifications

Vehicle controls must include:

- selecting correct gear/range to negotiate terrain
- engaging and disengaging freewheel hubs in line with driving conditions

and may include:

- where used, fitting traction aids to vehicle in line with manufacturer specifications as required by terrain

Manufacturer specifications

may include:

- engine characteristics
- system's warning functions
- four-wheel drive operation
- radius of turning circle
- safety procedures
- instructions relating to engine air intake

Specific driving conditions may include:

- ascent
- descent
- cross-slope operation

Unit Sector(s)

Forest Growing and Management

Competency field

Not applicable

FPIFGM4201B Implement a forest establishment plan

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to establish or re-establish a section of native forest or plantation, either in a monoculture or multiple-use environment

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM4201A Implement a forest establishment plan

Application of the Unit

Application of the unit

The unit involves implementing a forest establishment plan in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Prepare for establishment | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to implementing a <i>forest establishment plan</i> are identified and followed</p> <p>1.2. <i>Local authority</i> coverage, <i>land owning</i> and boundaries, and <i>forest design</i> plan are identified and assessed</p> <p>1.3. Forest location including map and grid references are identified</p> <p>1.4. Land use <i>zoning</i> is identified and <i>planning permits</i> are checked for approval status</p> <p>1.5. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Implement forest establishment plan | <p>2.1. Method of establishment is selected in line with the requirements of the forest type, and environmental and organisational guidelines</p> <p>2.2. Forest type and available <i>species</i> are selected for establishment</p> <p>2.3. <i>Topography</i> is identified</p> <p>2.4. <i>Operational activities</i> are directed and scheduled, including required people, material and equipment, in line with organisational guidelines</p> <p>2.5. <i>Forest design</i> plan and <i>planting strategy</i> are coordinated to establish the forest</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Monitor and review establishment plan	3.1.Environmental protection measures for the landscape, soil and drainage are inspected for correct implementation 3.2.Operational staff, clients and contractors are regularly communicated with during the establishment phase to ensure smooth operation and progress 3.3.Operational activities are monitored and reviewed for potential improvements 3.4.Establishment method is reviewed and diagnosed for potential improvements 3.5.Forest establishment plan implementation results are <i>recorded and reported</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to coordinate relevant tools, equipment and resources; obtain approved planning permits; implement a forest establishment plan; follow identified environmental protection requirements
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for implementing a forest establishment plan
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of carbon emissions, and the cleaning of plant, tools and equipment

REQUIRED SKILLS AND KNOWLEDGE

- Organisational and site standards, requirements, policies and procedures for implementing a forest establishment plan
- Environmental risks and hazards
- Role of wood or waste products in generating renewable energy through biomass
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Forest establishment and planning procedures
- Forest design and planting strategies
- Regeneration principles and methods
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types and availability of resources, tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently implement a forest establishment plan in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to implementing a forest establishment plan
- following organisational policies and procedures

EVIDENCE GUIDE

- relevant to implementing a forest establishment plan
- implementing a forest establishment plan in line with regulations and organisational requirements
 - coordinating personnel to follow planning, communications and scheduling for forest establishment activities
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Forest establishment plan** is to include:
- research and implementation strategies for the establishment or re-establishment of a native or plantation forest on designated land
- Local authorities** are to include:
- local government councils or shires with local planning and zoning authority for a given region
- Land owning** is the process of notifying and obtaining owner approval to commence establishment operations
- Forest design** may include:
- forest layout
 - protected areas

RANGE STATEMENT

- access
- harvesting considerations
- environmental sustainability issues
- minimising environmental impact

Zoning is to include:

designated land with boundaries that fall within survey pegs for the land allocated for forest growing operations under local authority allocation owned:

- privately
- by government
- by the forestry organisation

Planning permits

- are granted by local authorities for forest growing operations to take place
- based on approved plans submitted to local government, following required regulations

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards
- obstacles
- drainage

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Species may include:

- native species of one or more type
- imported species

Topography is to include:

- map of the designated area showing:
 - terrain levels

RANGE STATEMENT

- soil types
 - contours
 - elevations
 - slopes
 - gullies
 - adjoining land parcels
- Operational activities** may include:
- forest design and map details
 - site preparation
 - access considerations
- planting for forest or streamside:
- buffers
 - filter strips
 - contours
 - gullies
 - crossing points
- environmental considerations, such as protection of:
- habitat
 - rainforest
 - flora and fauna
 - landscape
 - excluded areas
 - rubbish removal
- may include preparation of:
- permanent roads
 - temporary roads
 - landings
 - dumps
 - snig tracks
 - forwarding tracks
 - adjoining land
 - wet weather restrictions
 - fire protection requirements
- Planting strategy** is to include:
- procedures for optimising time and safety during the establishment phase
 - planting to a structured plan that minimises damage to planted stock and the environment
- Records and reports** may producing detailed records and reports outlining

RANGE STATEMENT

include:

the planning of forest establishment and regeneration processes, including:

- difficulties
- costs
- data analysis
- efficiency and effectiveness
- results
- recommendations for future work

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Forest Growing and Management

FPIFGM4202B Manage stand health

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to assess trees and apply treatments to ensure the health of a stand of trees. The unit includes reviewing and evaluating program processes against defined criteria

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM4202A Manage stand health

Application of the Unit

Application of the unit The unit involves managing stand health in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Plan stand health program | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to managing <i>stand health</i> are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are monitored and adhered to in line with relevant legislation and regulations</p> <p>1.3. Relevant <i>information</i> is obtained, analysed and assessed for impacts on stand health planning</p> <p>1.4. <i>Methods</i> of encouraging stand health are identified and selected</p> <p>1.5. Measurable performance indicators, specifications and targets are developed and documented</p> <p>1.6. Required <i>approvals</i> are identified, sought and obtained from relevant authorities</p> <p>1.7. Stand health <i>program</i> and its performance indicators are clearly documented and communicated to <i>appropriate personnel</i></p> |
| 2. Implement and monitor stand health program | <p>2.1. Resources required for the stand health program are coordinated and scheduled and <i>required documentation</i> is completed clearly and accurately</p> <p>2.2. Schedule for the site is organised and relevant <i>individuals, groups</i> and bodies are consulted as required using appropriate interpersonal techniques</p> <p>2.3. Stand health program is implemented and monitored to ensure health and protection of stand</p> <p>2.4. Systematic <i>checks</i> are carried out to ensure that</p> |

ELEMENT**PERFORMANCE CRITERIA**

	compliance requirements relevant to stand health activities are followed
	2.5. Adjustments to the stand health program are made as required and communicated to appropriate personnel
	2.6. Potential and existing risks and hazards in the work area are identified and controlled
	2.7. Communication with others is established and maintained in line with OHS requirements
	2.8. Limitations are identified and assistance is sought as required in line with workplace procedures
3. Review stand health program	3.1. Information from stand health operation is assessed and evaluated to confirm that techniques, methodologies and budgets are in line with program
	3.2. Issues and impediments to stand health activities and program costs are identified and documented
	3.3. Cost benefit analysis is prepared and recommendations are made, based on the analysis of data and identified issues
	3.4. Results of stand health program are clearly communicated and disseminated to appropriate personnel
	3.5. Stand health management process is recorded and reported to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use relevant tools, equipment and resources; supervise operational staff and contractors to achieve specific outcomes; recognise common diseases, pests and nutritional deficiencies
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others, including landholders, and internal and external bodies and groups; present information orally and in writing to a wide range of individuals and groups
- Literacy skills sufficient to collate and assess information against specified criteria; interpret and act on written information, including maps, plans and reports;

REQUIRED SKILLS AND KNOWLEDGE

complete data and quality control; write reports and submissions in appropriate style and format; record and report workplace information; maintain documentation

- Numeracy skills sufficient to interpret numerical data; identify quantities and costings
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing stand health
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of environmental impact, and the safe use and storage of chemicals
- Environmental risks and hazards
- Organisational and site standards, requirements, policies and procedures for managing stand health
- Health requirements of the target species
- Procedures for identifying and evaluating structural defects in trees
- Principles of identifying pests, diseases and physiological damage to trees
- Methods of attacking tree pests and diseases
- Methods of analysing the nutritional status of trees
- Methods for recognising and identifying a range of species
- Methods of collecting and storing specimens for identification
- Plant identification sources
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

EVIDENCE GUIDE

Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and supervise the implementation of a stand health program within applicable environmental, legislative and organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing stand health
- following organisational policies and procedures relevant to managing stand health
- developing a stand health program within specified budgetary guidelines, incorporating measurable performance indicators, specifications and targets
- identifying and recommending methods and strategies to manage health and protection of stand
- monitoring implementation of the stand health program and ensuring relevant legal, OHS and environmental requirements are followed
- documenting results from stand health program and preparing a report for dissemination to relevant personnel

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Stand health may include:

- stress problems
- pests and diseases, such as insects, fungal, bacterial, viral, birds and animals
- structural
- storm damage
- root damage
- gassing
- compaction
- incineration
- nutrient deficiencies
- chemical
- changes in levels
- competition
- poor draining
- vandalism
- salt
- drought

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions
- hygiene of the area
- relevant commonwealth, state or territory, and local legislation and regulations

RANGE STATEMENT

- Information** may include:
- organisational strategic and tending plans
 - appropriate regulations
- Methods** may include:
- application of fertilisers
 - application of pesticides and herbicides
 - pruning techniques
 - competition management techniques
 - browsing control techniques
 - consideration of environmental sustainability issues
- Approvals** may be required:
- where the use of chemicals or biological agents is intended
 - where browsing control techniques may impact on neighbouring properties
 - where consideration of environmental sustainability issues applies
- Program** may include:
- organisational terminology
 - guidelines
 - plans
 - budgets
 - policies and timelines
 - internal memos
 - resources, including people, material and equipment
 - disposal methods, such as burning, burying and chemical destruction
- Appropriate personnel** may include:
- operational staff and contractors
 - clients
 - colleagues
 - line management
 - relevant external authorities and agencies
- Required documentation** may include:
- maps
 - plans
 - reports
- Individuals and groups** may include:
- neighbouring landholders
- Checks** may include:
- ensuring:
- relevant organisational OHS procedures, practices, policies and precautions are observed and followed
 - site environmental requirements and relevant

RANGE STATEMENT

commonwealth, state or territory, and local legislation and regulations are followed

- performance indicators, targets and specifications are met
- quantity, cost and provenances collected are in line with plan specifications
- required organisational documentation is completed clearly and accurately

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Limitations may include:

- job role and responsibilities
- own competency level
- industry requirements
- own understanding of risk identification processes
- own interpretation of legislation, regulations and procedures
- OHS and environmental requirements
- difficulties or issues faced
- costs
- data analysis
- results
- recommendations for future work

Records and reports may include:

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM4203C Design plantations

Modification History

Version	Comments
Version 1.1	Released with FPI11 Training Package Version 2. Addition of item in required knowledge section. Equivalent to FPIFGM4203B Design plantations.
Version 1	First released with FPI11 Training Package Version 1.

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to design a plantation or monoculture. The unit also applies to an area that is to be used for multiple uses, such as farm forestry.

Application of the Unit

Application of the unit

The unit involves designing plantations in a variety of work settings, including:

- forest environments
- farms
- agriculture
- workshops
- domestic
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication.

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare plantation design	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>plantation design</i> are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are identified and adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Relevant plans</i> are reviewed and analysed to assess impacts on plantation planning</p> <p>1.4. <i>Consultative processes</i> are used to obtain input into the design in line with site requirements</p> <p>1.5. <i>Plantation requirements</i> and location are identified from organisational maps, plans and strategies in line with site procedures and environmental requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	1.6.Measurable performance indicators, specifications and targets are developed and documented in line with organisational procedures
2. Design components of plantation	2.1.Necessary surveys are specified and tolerances determined in line with organisational procedures and environmental requirements 2.2.Site preparation techniques are identified in line with site parameters and organisational procedures 2.3.Design <i>components</i> are identified and <i>approvals</i> obtained in line with organisational plans, policies and parameters of site, and environmental requirements 2.4.Design plan and performance indicators are clearly communicated to <i>appropriate personnel</i>
3. Review plantation design	3.1.Plantation data and documentation are analysed against plans and adjacent plantations in line with organisational procedures 3.2.Recommendations are prepared and design improvements implemented in line with organisational procedures and environmental requirements 3.3.Plantation design processes are <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to analyse qualitative and quantitative information and data; prepare a range of reports, documentation and submissions where precise meaning is required; present written and oral information to a wide range of individuals and groups; record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to assess and modify plans to achieve specified

REQUIRED SKILLS AND KNOWLEDGE

outcomes; identify problems and equipment faults; demonstrate appropriate response procedures; demonstrate effective time and project management

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for designing plantations
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of environmental impact, carbon emissions and noise, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for designing plantations
- Environmental risks and hazards
- Recycling and re-use guidelines
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Interpretation of aerial photography
- Common diseases, pests and nutritional deficiencies
- Relevant species characteristics and selection information
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently design a plantation, based on specific organisational plans and objectives

Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy all of the

EVIDENCE GUIDE

competency in this unit

requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to designing plantations
- following organisational policies and procedures relevant to designing plantations
- designing a plantation using consultative processes with colleagues and stakeholders to obtain inputs, and ensure efficient use of resources
- reviewing plantation design against determined performance indicators, specifications and targets
- developing recommendations for design improvements based on results of analysis and review of design and feedback received

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related

EVIDENCE GUIDE

conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances

RANGE STATEMENT

- Environmental requirements** may include:
- safe forest practices, including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Plantation design will be in line with organisational marketing plan and local environmental imperatives

- Environmental protection**
- ground growth

RANGE STATEMENT

measures may include:

- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions
- hygiene of the area
- relevant commonwealth, state or territory, and local legislation and regulations

Relevant plans may include:

- tending plans
- harvesting plans
- organisational marketing and strategic plans
- plans or regulations relating to chemical use and environmental requirements

Consultative processes may include:

- face-to-face meetings
- telephone
- facsimile
- written and email communication

may be with:

- clients
- technical operators
- marketing groups
- operations supervisor
- colleagues
- relevant groups or bodies, such as environmental bodies
- local, state or territory, and federal government bodies and agencies
- internal policy groups
- labour force

Plantation requirements may include:

- appropriate species
- provenance
- distribution and hardiness of trees to be sown or planted to suit the area to be planted

Components may include:

- roads
- fences

RANGE STATEMENT

- Approvals** may include:
- drainage channels
 - forest area boundaries
 - environmental bodies
 - local, state or territory, and federal government bodies and agencies
 - long-term budget approvals
- Appropriate personnel** may include:
- contractors
 - technical experts
 - management
 - colleagues
 - clients
 - relevant groups
- Records and reports** may include:
- difficulties or issues faced during design processes
 - recommendations for future work
 - results
 - costs
 - data analysis
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM4204B Conduct a pests and diseases assessment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assess the presence and level of pests and diseases within a forest area. The unit includes the assessment of animal populations, weeds, diseases and pests

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM4204A Conduct a pests and diseases assessment

Application of the Unit

Application of the unit

The unit involves conducting a pests and diseases assessment in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Prepare for assessment | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to conducting pest and disease assessment are identified and followed</p> <p>1.2. Frequency of <i>assessment</i> for particular forest areas and size of sample areas are calculated from inventory programs, budgets and organisational guidelines</p> <p>1.3. <i>Pests and diseases</i> are researched and recorded for the location to be assessed</p> <p>1.4. Methods of pest and disease <i>measurement</i> are selected in line with the forest management plan</p> <p>1.5. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Implement pest and disease assessment | <p>2.1. Method of assessment is selected in line with the forest type, and local, environmental and organisational guidelines</p> <p>2.2. People, materials and equipment for the assessment are coordinated and scheduled in line with organisational guidelines</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Monitor and review assessment	<p>2.3. <i>Schedule</i> for the site is organised in conjunction with other relevant forest operations personnel</p> <p>2.4. Permits or licences required for the assessment are obtained</p> <p>2.5. Personnel are directed to undertake the assessment and collect the data on pests and diseases</p> <p>2.6. Data retrieved from the assessment is <i>translated</i> and reported</p> <p>3.1. Environmental protection measures are checked to ensure compliance with relevant legislation and regulations</p> <p>3.2. Operational staff and contractors are regularly communicated with during the assessment phase to ensure smooth operation and progress</p> <p>3.3. Operational activities are monitored and reviewed for potential improvements</p> <p>3.4. Assessment method is reviewed and <i>diagnosed</i> for potential improvements</p> <p>3.5. Assessment results are <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to organise and obtain required permits or licences; efficiently and safely conduct pest and disease assessment
- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to coordinate and schedule resources, materials and equipment appropriate for assessment requirements; translate assessment data and report workplace information, such as results, in appropriate style and format; present written and oral information to a wide range of individuals and groups; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to review and identify work requirements; identify

REQUIRED SKILLS AND KNOWLEDGE

problems and equipment faults; demonstrate appropriate response procedures; demonstrate effective time and project management

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting pest and disease assessment
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, the minimisation of environmental impact, and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for conducting pest and disease assessment
- Environmental risks and hazards
- Types of pests and diseases
- Methods and techniques to assess animal populations, diseases, pests and weeds
- Methods of measurement and collecting data on pests and diseases
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct a pests and diseases assessment in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to conducting a pests and diseases assessment
- following organisational policies and procedures relevant to conducting a pests and diseases assessment
- conducting a pests and diseases assessment in line with regulations and organisational requirements
- coordinating personnel to follow planning, communications and scheduling for conducting a pests and diseases assessment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required

RANGE STATEMENT

- actions relating to forest fire
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements** may include:
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Assessment** is to include: analysing the impact on the forest area of:
- animal populations
 - diseases
 - pests

RANGE STATEMENT

- weeds
- Pests and diseases** may include: animals, such as:
- rodents
 - birds
 - feral cats
 - wild dogs
 - insects
 - diseases that affect plants
 - weeds and creeping plants
- Measurement** is to include:
- how many pests or diseases of each type exist per designated area based on size of area
- Environmental protection measures** may include:
- ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards and obstacles
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Schedule** is to include:
- division of areas into a roster for undertaking assessment
- Translated** is the process of converting measurement details and data of pests and diseases into useable information
- Diagnosis** is to include:
- analysis of the assessment process and operational procedures to explore improvement potential
- Records and reports** may detailed records and reports outlining the planning

RANGE STATEMENT

include:

of pest and disease assessment, including:

- difficulties
- costs
- data analysis
- recommendations for future work
- results

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field**Competency field**

Forest Growing and Management

FPIFGM4205B Monitor regeneration rates

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to monitor and coordinate the assessment of new plant stocks within a forestry area. The unit includes the assessment of germination, survival, regeneration and basal area surveys

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM4205A Monitor regeneration rates

Application of the Unit

Application of the unit

The unit involves monitoring regeneration rates in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Prepare for monitoring | <p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to monitoring regeneration rates are identified and followed</p> <p>1.2. Frequency of <i>assessment</i> for particular forest areas and size of sample areas are calculated from inventory programs, budgets and organisational guidelines</p> <p>1.3. <i>Regeneration types</i> are researched and recorded for the location to be assessed</p> <p>1.4. Methods of regeneration <i>measurement</i> are selected in line with the forest management plan</p> <p>1.5. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Implement assessment of regeneration rates | <p>2.1. Method of assessment is selected in line with the forest type, and local, environmental and organisational guidelines</p> <p>2.2. People, materials and equipment for the assessment are coordinated and scheduled in line with organisational guidelines</p> |

ELEMENT	PERFORMANCE CRITERIA
	2.3. <i>Schedule</i> for the site is organised in conjunction with other relevant forest operations personnel
	2.4. Permits or licences required for the assessment are obtained
	2.5. Personnel are directed to undertake the assessment and collect the data on regeneration rates
	2.6. Data retrieved from the assessment is <i>translated</i> and reported
3. Monitor and review assessment	3.1. Environmental protection measures are checked to ensure compliance with relevant legislation and regulations
	3.2. Operational staff and contractors are regularly communicated with during the assessment phase to ensure smooth operation and progress
	3.3. <i>Operational activities</i> are monitored and reviewed for potential improvements
	3.4. Assessment method is reviewed and <i>diagnosed</i> for potential improvements
	3.5. Assessment results are <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to coordinate relevant tools, equipment and resources; monitor regeneration rates
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to organise and obtain required permits or licences; translate, record and report workplace information, such as collected data and results, in appropriate style and format; present written and oral information to a wide range of individuals and groups; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures; demonstrate effective time and project management

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for monitoring regeneration rates
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of environmental impact and carbon emissions, and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for monitoring regeneration rates
- Environmental risks and hazards
- Using material effectively and efficiently
- Types and rates of regeneration
- Assessment techniques for regeneration rates
- Measurement and data collection methods
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently monitor regeneration rates in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to monitoring regeneration rates
 - following organisational policies and procedures relevant to monitoring regeneration rates
 - monitoring regeneration rates in line with regulations and organisational requirements
 - coordinating personnel to follow planning, communications and scheduling for monitoring regeneration rates
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and

RANGE STATEMENT

- carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Assessment** is to include:
- monitoring germination and survival rates
 - observing the effects of browsing, the distribution of new growth in square metres and regeneration rates
 - calculating basal areas
- Regeneration types** may include:
- seeding
 - seedlings

RANGE STATEMENT

- Measurement** is to include:
- coppice
 - standard sprouts
 - quantity of each type in existence per designated area based on size of area
- Environmental protection measures** may include:
- ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards and obstacles
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Schedule** is to include:
- division of areas into a roster for undertaking monitoring
- Translated** is the process of converting measurement details and data of regeneration rates into useable information
- Operational activities** may include:
- monitoring of regeneration rates
- Diagnosis** is to include:
- analysis of the monitoring process and operational procedures to explore improvement potential
- Records and reports** may include:
- detailed records and reports outlining the monitoring of regeneration rates, including:
- difficulties
 - costs
 - data analysis
 - recommendations for future work

RANGE STATEMENT

- results

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM4206B Conduct a wood volume and yield assessment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan, implement and review a wood volume and yield assessment within a forest area. The unit includes stand assessment; assessment of timber volume by size classes, timber quality, damage, and form; and growth monitoring

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM4206A Conduct a wood volume and yield assessment

Application of the Unit

Application of the unit

The unit involves conducting a wood volume and yield assessment in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan assessment	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to conducting a wood volume and yield assessment are identified and followed</p> <p>1.2. Frequency of <i>assessment</i> for particular forest areas and size of sample areas are calculated from inventory programs, budgets and organisational guidelines</p> <p>1.3. <i>Wood volume and yield</i> are researched and recorded for the location to be assessed</p> <p>1.4. Methods of wood volume and yield <i>measurement</i> are selected in line with the forest management plan</p> <p>1.5. Site <i>environmental protection measures</i> are monitored in line with relevant legislation and regulations</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Implement wood volume and yield assessment	<p>2.1. Method of assessment is selected in line with the forest type, and local, environmental and organisational guidelines</p> <p>2.2. People, materials and equipment for the assessment are coordinated and scheduled in line with organisational guidelines</p>

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|----------------------------------|--|
| 3. Monitor and review assessment | <p>2.3. <i>Schedule</i> for the site is organised in conjunction with other relevant forest operations personnel</p> <p>2.4. Permits or licences required for the assessment are obtained</p> <p>2.5. Personnel are directed to undertake the assessment and collect the data on wood volume and yield</p> <p>2.6. Data retrieved from the assessment is <i>translated</i> and reported</p> <p>3.1. Environmental protection measures are checked to ensure compliance with relevant legislation and regulations</p> <p>3.2. Operational staff and contractors are regularly communicated with during the assessment phase to ensure smooth operation and progress</p> <p>3.3. Operational activities are monitored and reviewed for potential improvements</p> <p>3.4. Assessment method is reviewed and <i>diagnosed</i> for potential improvements</p> <p>3.5. Assessment results are <i>recorded and reported</i> to the appropriate personnel</p> |
|----------------------------------|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to coordinate and schedule resources, materials and equipment appropriate for assessment requirements; organise and obtain required permits or licences; assess wood volume and yield assessment requirements
- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to translate, record and report workplace information, such as assessment data and results, in appropriate style and format; present written and oral information to a wide range of individuals and groups; maintain documentation
- Numeracy skills sufficient to implement program planning and budgeting
- Problem solving skills sufficient to demonstrate effective time and project management

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting a wood volume and yield assessment
- Environmental protection requirements, including the safe disposal of waste material and the minimisation of environmental impacts
- Organisational and site standards, requirements, policies and procedures for conducting a wood volume and yield assessment
- Environmental risks and hazards
- Using material effectively and efficiently
- Range of wood volumes and yields
- Assessment techniques for wood volume and yield
- Measurement and data collection methods for wood volume and yield
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can effectively and efficiently plan, implement and review a wood volume and yield assessment in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or

EVIDENCE GUIDE

territory legislative and regulatory requirements and codes of practice relevant to conducting a wood volume and yield assessment

- following organisational policies and procedures relevant to conducting a wood volume and yield assessment
- planning, conducting and reviewing a wood volume and yield assessment in line with regulations and organisational requirements
- coordinating personnel to follow planning, communications and scheduling for a wood volume and yield assessment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire

RANGE STATEMENT

Environmental requirements
may include:

- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Assessment is to include:

analysing:

- timber volume by size classes
- timber quality
- timber damage
- form and rates of growth

RANGE STATEMENT

Wood volume and yield may include:

- quantity (gross volume) of timber per square kilometre
- estimated yield (net volume) of useable timber per square kilometre

Measurement is to include:

- how many trees of each type and size exist per designated area based on size of area

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- division of areas into a roster for undertaking assessment

Schedule is to include:

Translated

is the process of converting measurement details and data of wood volume and yield into useable information

Diagnosis is to include:

- analysis of the assessment process and operational procedures to explore improvement potential

Records and reports may include:

producing detailed records and reports outlining the planning of wood volume and yield assessment, including:

- difficulties
- costs
- data analysis
- efficiency and effectiveness

RANGE STATEMENT

- results
- recommendations for future work

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM4207B Conduct a forest site assessment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan, implement and review a forest site assessment. The unit includes the assessment of soils, terrain, slope, rainfall and environmental aspects of the forest area

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM4207A Conduct a forest site assessment

Application of the Unit

Application of the unit

The unit involves conducting a forest site assessment in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------------|--|
| 1. Plan assessment | <p>1.1.Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to conducting a forest site assessment are identified and followed</p> <p>1.2.Frequency of <i>assessment</i> for particular forest areas and size of sample areas are calculated from inventory programs, budgets and organisational guidelines</p> <p>1.3.Forest site is researched and recorded for the location to be assessed</p> <p>1.4.Methods of forest site <i>measurement</i> are selected in line with the forest management plan</p> <p>1.5.Site <i>environmental protection measures</i> are monitored in line with relevant legislation and regulations</p> <p>1.6.<i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Implement forest site assessment | <p>2.1.Method of assessment is selected in line with the forest type, <i>topography</i>, and local, environmental and organisational guidelines</p> <p>2.2.People, materials and equipment for the assessment are coordinated and scheduled in line with organisational guidelines</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Monitor and review assessment	<p>2.3. <i>Schedule</i> for the site is organised in conjunction with other relevant forest operations personnel</p> <p>2.4. Permits or licences required for the assessment are obtained</p> <p>2.5. Personnel are directed to undertake the assessment and collect the data on the forest site</p> <p>2.6. Data retrieved from the assessment is <i>translated</i> and reported</p> <p>3.1. Environmental protection measures are checked to ensure compliance with relevant legislation and regulations</p> <p>3.2. Operational staff and contractors are regularly communicated with during the assessment phase to ensure smooth operation and progress</p> <p>3.3. Operational activities are monitored and reviewed for potential improvements</p> <p>3.4. Assessment method is reviewed and <i>diagnosed</i> for potential improvements</p> <p>3.5. Assessment results are <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to assess a forest site
- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to coordinate and schedule resources, materials and equipment appropriate for assessment requirements; organise and obtain required permits or licences; translate assessment data and report results in appropriate style and format; present written and oral information to a wide range of individuals and groups; record and report workplace information; maintain documentation
- Numeracy skills sufficient to implement program planning and budgeting
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures; demonstrate effective time and project management

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting a forest site assessment
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of environmental impact and carbon emissions, and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for conducting a forest site assessment
- Environmental risks and hazards
- Role of wood or waste products in generating renewable energy through biomass
- Using material effectively and efficiently
- Forest site analysis techniques
- Assessment techniques for forest site assessments
- Measurement and data collection methods
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan, implement and review a forest site assessment in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to conducting a forest site assessment
- following organisational policies and procedures relevant to conducting a forest site assessment
- planning, conducting and reviewing a forest site assessment in line with regulations and organisational requirements
- coordinating personnel to follow planning, communications and scheduling for conducting a forest site assessment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required

RANGE STATEMENT

- actions relating to forest fire
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements** may include:
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Assessment** is to include: analysing:
- soils
 - terrain
 - slope

RANGE STATEMENT

- rainfall
- environmental specifications
- cultural aspects of a forest area

Measurement is to include: number and size of terrain and environment factors that exist per designated area based on size of area

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Topography is to include:

map of the designated area showing:

- terrain levels
- contours
- elevations
- slopes
- gullies
- adjoining land parcels
- rainfall
- soil type

Schedule is to include:

- division of areas into a roster for undertaking assessment

Translated

is the process of converting measurement details and data of forest site into useable information

RANGE STATEMENT

Diagnosis is to include:

- analysis of the assessment process and operational procedures to explore improvement potential

Records and reports may include:

producing detailed records and reports outlining the conduct of a forest site assessment, including:

- difficulties
- costs
- data analysis
- efficiency and effectiveness
- results
- recommendations for future work

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Forest Growing and Management

FPIFGM4208B Plan a quarry

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to locate, test and gain approval for a quarry (borrow pit) operation for the purpose of sourcing material for forest roads and track, construction and maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM4208A Plan a quarry

Application of the Unit

Application of the unit

The unit involves planning a quarry in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for quarry operation	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to planning a quarry are identified and followed</p> <p>1.2. <i>Relevant parties</i> are consulted regarding land tenure and plans are reviewed and analysed prior to locating the quarry</p> <p>1.3. Proposed location for quarry is inspected and the quality and extent of quarry material <i>visually assessed</i> for suitability</p> <p>1.4. <i>End use</i> of quarry material and annual envisaged total quantities are researched, sampled and <i>tested</i> for suitability</p> <p>1.5. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.6. Operational staff and contractors are regularly communicated with during the planning process to ensure smooth operation and progress</p> <p>1.7. Quarry management plan is prepared for approval in line with site procedures</p> <p>1.8. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Implement quarry operation plan	<p>2.1. Quantities required and <i>methods of extracting</i> material from the quarry are selected, based on research and organisational plan</p> <p>2.2. Cost benefit analysis is conducted to assess <i>viability</i></p>

ELEMENT	PERFORMANCE CRITERIA
	<p><i>and lifespan</i> of the quarry</p> <p>2.3. Licences or permits required for quarry development are obtained</p> <p>2.4. People, materials and equipment for quarry development are coordinated and scheduled in line with organisational guidelines</p> <p>2.5. <i>Schedule</i> for the site is organised in conjunction with adjacent work plans and road maintenance or construction plans</p> <p>2.6. Processes are established to liaise with relevant parties during the quarry development process</p> <p>2.7. Schedule for the quarry and <i>other documentation</i> are produced and completed in line with OHS guidelines</p>
3. Monitor and review quarry planning	<p>3.1. Environmental protection measures are checked to ensure compliance with relevant legislation and regulations</p> <p>3.2. <i>Planning activities</i> are monitored and reviewed for potential improvements</p> <p>3.3. Planning method is reviewed and <i>diagnosed</i> for potential improvements</p> <p>3.4. Planning process and results are <i>recorded and reported</i> to appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to coordinate and schedule resources, materials and equipment to meet planning requirements; plan a quarry
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to prepare a quarry management plan; organise and obtain required licences or permits; record and report workplace information; maintain documentation
- Numeracy skills sufficient to conduct a cost benefit analysis
- Problem solving skills sufficient to identify problems; demonstrate appropriate

REQUIRED SKILLS AND KNOWLEDGE

response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning a quarry
- Environmental protection requirements, including the minimisation of environmental impact and safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for planning a quarry
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Quarry planning processes
- Range of quarry operations
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan a quarry in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or

EVIDENCE GUIDE

- territory legislative and regulatory requirements and codes of practice relevant to planning a quarry
- following organisational policies and procedures relevant to planning a quarry
 - planning a quarry in line with regulations and organisational requirements
 - coordinating personnel to follow planning, communications and scheduling for planning a quarry
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures

Environmental requirements

RANGE STATEMENT

may include:

- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Relevant parties may include:

- individuals, groups or bodies involved with tenure
- community or official organisational representatives
- environmental agencies/authorities
- neighbouring landholders
- local authorities
- relevant government departments and agencies/authorities

RANGE STATEMENT

- Visual assessment** is to include:
- visual estimation of the quality and quantity of quarry material available for end use purposes
- End use** may include:
- road construction
 - road maintenance
 - track rehabilitation
 - snig tracks
 - landings
- Testing** is to include:
- laboratory testing of the material conducted by testing experts to gauge suitability
- Environmental protection measures** may include:
- ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards and obstacles
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Methods of extraction** may include:
- with plant and equipment
 - using blasting methods
- Viability and lifespan** are to include:
- an analysis of the quarry financial viability, based on:
- cost-effectiveness
 - continued quality of the material
 - longevity of the quarry
- Schedule** is to include:
- development plan for the quarry site
 - point at which operations occur
- Other documentation** may include:
- maps
 - topography

RANGE STATEMENT

- plans
 - reports
- Planning activities** are to include:
- processes for planning, locating, establishing and operating the quarry
- Diagnosis** is to include:
- analysis of the planning process and development procedures to explore improvement potential
- Records and reports** may include:
- producing detailed records and reports outlining the quarry planning process, including:
- difficulties
 - costs
 - data analysis
 - efficiency and effectiveness
 - recommendations for future work
 - results
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM4209B Interpret and use aerial photographs for forest management

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to use aerial photography as a tool to assist with forest management in both plantation and native forests

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM4209A Interpret and use aerial photographs for forest management

Application of the Unit

Application of the unit

The unit involves interpreting and using aerial photographs for forest management in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Plan aerial photography | <ul style="list-style-type: none"> 1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to interpreting and using aerial photographs for forest management are identified and followed 1.2. Forest management objectives are established in line with organisational requirements 1.3. <i>Available aerial photographs</i> are located and obtained in line with <i>standards and requirements</i> and organisational guidelines 1.4. <i>Factors</i> and <i>type</i> of photography appropriate for current forest management <i>application</i> are determined 1.5. Aerial photographs are assessed for suitability and selected to meet forest management application |
| 2. Interpret forest management information from aerial photographs | <ul style="list-style-type: none"> 2.1. Aerial photographs are <i>positioned</i> for viewing and scale is calculated and documented in line with site procedures 2.2. <i>Key aspects</i> of aerial photographs are established and documented in line with site procedures 2.3. Type of photography suitable for forest management application is identified using established stratification in line with site procedures and |

ELEMENT	PERFORMANCE CRITERIA
	environmental requirements
	2.4. Photomapping standards are interpreted and applied for consistent data-gathering
	2.5. <i>Forest attributes</i> are identified and required <i>forest management information</i> is derived and <i>interpreted</i> in line with interpretation convention and <i>guidelines</i>
	2.6. Aerial photographs are interpreted and mapped in line with organisational guidelines
	2.7. <i>Field</i> observations, <i>verification</i> and validation are recorded and reported in appropriate formats in line with organisational guidelines
3. Update maps and plans from aerial photographs	3.1. <i>Maps and plans</i> are assessed and <i>updated</i> as required, using appropriate symbols, colours and conventions, to meet forest management project requirements
	3.2. Appropriate <i>tools</i> are used to <i>transfer data</i> in line with manufacturer recommendations
	3.3. Documentation is completed, processed and maintained in line with organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant equipment and materials; interpret forest area detail from a map; identify disease symptoms in trees and forest areas using aerial photographs; identify vegetation characteristics on an aerial photograph; locate required photographs from appropriate records (flight plan map)
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record, report and maintain information, including details of forest attributes and topographic information; read and interpret complex information, including charts, tables, maps and flight plans; identify and interpret title panel information on an aerial photograph; maintain documentation
- Numeracy skills sufficient to apply appropriate mathematical techniques to calculate scale of an aerial photograph, scale distances for a map, and calculate and

REQUIRED SKILLS AND KNOWLEDGE

manipulate height and area information; identify map type and map features, including topographic map features

- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures; follow procedures in interpreting forest management information

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for interpreting and using aerial photographs for forest management
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for interpreting and using aerial photographs for forest management
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Common scales used on maps and plans, and procedures for their use and manipulation
- Forest types and structures
- Representation of topographic features on maps and plans
- Range of photographic film, and photo types
- Care and storage of aerial photographs
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must

EVIDENCE GUIDE

be able to provide evidence that they can derive and interpret information from an aerial photograph for forest management purposes according to organisational guidelines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to interpreting and using aerial photographs for forest management
- following organisational policies and procedures relevant to interpreting and using aerial photographs for forest management
- sourcing and obtaining suitable aerial photographs appropriate to forest management project requirements
- establishing key aspects of aerial photographs
- deriving and interpreting information from forest topographic features
- documenting and maintaining data and information
- interpreting forest area detail from a map and scale distances, and calculating height and area information

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package

EVIDENCE GUIDE

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth,

RANGE STATEMENT

state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

Available aerial photographs may include:	<ul style="list-style-type: none">• ethical standards• recording and reporting requirements• equipment use, maintenance and storage requirements• environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)• photographs, which may be:<ul style="list-style-type: none">• held by the organisation• required to be purchased• borrowed from another organisation
Standards and requirements include:	<ul style="list-style-type: none">• scale• flying height and focal length• required percent endlap and sidelap• orientation• location and number of flight lines required• total number of photographs required• allowable drift, crab, tilt and image motion• camera characteristics, including format, lens quality, shutter speed and aperture, film and filter characteristics• acceptable seasons of the year, time of day, allowable present cloud cover and hot spots
Factors:	to be considered when selecting photography for a project are: <ul style="list-style-type: none">• colour or black and white• date of acquisition• scale• minimum mappable area• actual smallest operational unit area• scale of mapping relative to scale of presentation
Types may include:	project, mapsheet, spot and stratigraphic: <ul style="list-style-type: none">• of photographic classes, including terrestrial, vertical and oblique• of aerial photographic film, including black and white, black and white infra-red, colour, colour infra-red
Applications	of aerial photographs to natural resource

RANGE STATEMENT

management include:

- road or plantation design
- field navigation and interpretation of forest types
- forest structure
- environmental processes, such as salinity discharge
- ecological vegetation communities, such as coastal heathlands
- land capability classes
- remnant vegetation (roadside vegetation)
- diseased vegetation classes, such as *Eucalyptus* dieback from *Phytophthora*
- orienting and aligning a pair of overlapping aerial photographs for stereoscopic viewing
- determining north and flight line path

Positioning may include:

Key aspects include:

and may include:

- mapsheet
- flight orientation
- photography type
- focal length
- film number
- run number
- frame number
- height above sea level
- photography date

Forest attributes may include:

topographic features, such as:

- roads and tracks
- watercourses
- ridges and spurs
- saddles
- peaks and knobs

Forest management information:

derived from photo may include:

- area
- height
- species
- crown cover
- crown form
- disturbance

RANGE STATEMENT

- aspects to be considered as part of the environmental management process
- Interpretation** may include: basic principles, such as:
- absolute and relative size and shape
 - shadow
 - tone or colour
 - texture
 - pattern and location
 - association and convergence of evidence
- Guidelines** may include:
- predetermined classes
 - stratification
- Field verification** includes:
- accuracy of all mapped topographic information
 - measure of accuracy of associated base topographic or digital base map
 - spatial accuracy of strata
 - measure of accuracy of content of strata
- Maps and plans** may include:
- cadastral plans
 - topographic maps
 - locality plans
 - site plans
 - maps and plans generated through the use of geographic information systems (GIS)
- Updating** of maps and plans may be:
- manual
 - electronic (digital)
 - using data transfer technology
- Tools** may include:
- electronic data transfer technology
 - manual light tables
 - mechanical light tables, including Omnigraph, Kartoflex, Zoom Transfer Scope, Artiscopes and Sketchmaster
- Transferring data** may include:
- rescaling from one source to another
 - transferring from map to map
 - transferring from photograph to map or diapositive to map

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM4210B Prepare a tender

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to respond to and prepare a tender. The unit includes preparation of bid estimates in the required format

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM4210A Prepare a tender

Application of the Unit

Application of the unit The unit involves preparing a tender in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify tender requirements	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to preparing a <i>tender</i> are identified and followed</p> <p>1.2. <i>Relevant information</i> and protocols are obtained in line with organisational procedures</p> <p>1.3. Project specifications are identified and job scope defined in line with organisational procedures and environmental requirements</p> <p>1.4. Required <i>resources</i> and <i>capacity</i> are identified and documented in line with organisational procedures</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with organisational requirements</p>
2. Complete tender documentation	<p>2.1. Tender is prepared in line with project specifications and timeline</p> <p>2.2. Tender information is collated and documented in required format</p> <p>2.3. Tender document is promptly disseminated to <i>appropriate personnel</i> for review and modification in line with organisational procedures</p> <p>2.4. Areas of insufficient detail are identified and corrected in line with organisational procedures</p>
3. Undertake bid estimation	<p>3.1. Bid <i>estimations</i> are detailed in the required format in line with organisational procedures</p> <p>3.2. Work is sequenced in line with project timelines, organisational procedures and environmental requirements</p> <p>3.3. Contingency plans are developed in line with</p>

ELEMENT**PERFORMANCE CRITERIA**

- organisational procedures
- 3.4. Budget approval is obtained for appropriate personnel in line with organisational requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment; interpret and evaluate tender specifications
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others; interpret and convey information in written or verbal form
- Literacy skills sufficient to prepare a tender, based on the accurate assessment of tender requirements; prepare written tenders in appropriate style and format; record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time, cost, quality and quantity
- Problem solving skills sufficient to review and identify work requirements; identify problems; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for preparing a tender
- Environmental protection requirements, including the minimisation of environmental impact and the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for preparing a tender
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Problem identification and resolution strategies, including methods for identifying omissions or areas of insufficient detail in tender documentation
- Risk assessment procedures
- Organisational workflow
- Tender formats and protocols

REQUIRED SKILLS AND KNOWLEDGE

- Established communication channels and protocols
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can efficiently prepare a tender in line with specifications and timeframes

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to preparing a tender
- following organisational policies and procedures relevant to preparing a tender
- interpreting tender specifications to identify resource requirements and organisational capacity
- preparing tender documentation in the required format
- determining areas of insufficient detail or omissions from tender documentation and making necessary improvements

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than

EVIDENCE GUIDE

confirmatory questions, will usually be conducted in an off-site context

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Tender may include:

- in-house
- negotiated
- open
- selective

Relevant information:

- may be from the tender supplier

and may include:

- specifications
- performance measures
- due date
- number of copies required
- format of information
- protocols

Resources may include:

- work
- time
- personnel
- equipment

Capacity may include:

- resources
- time
- other priorities
- competition
- facilities
- expertise of staff

Communication may include:

- verbal and non-verbal language
- constructive feedback

RANGE STATEMENT

- active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
- Appropriate personnel** may include:
- managers
 - supervisors
 - colleagues
 - clients
- Estimations** may be:
- verbal or written
- and may include:
- time
 - cost
 - quality
 - quantity

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM5201B Plan and manage an inventory program

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and manage forest assessments, based on an inventory program. The unit includes conducting consultative processes, and monitoring and analysing the effectiveness of the program

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM5201A Plan and manage an inventory program

Application of the Unit

Application of the unit

The unit involves planning and managing an inventory program in a forest environment at a managerial level

These skills and knowledge are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan inventory program	<p>1.1. Applicable <i>occupational health and safety (OHS), environmental, legislative and organisational requirements</i> relevant to planning and managing an <i>inventory program</i> are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are identified and adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Timeline</i> and budget are identified and checked with <i>appropriate personnel</i></p> <p>1.4. Organisational strategic and marketing plans are reviewed and analysed to check impact on tree breeding operation</p> <p>1.5. <i>Methods</i> of measurement and frequency of assessment are identified and documented in line with site requirements</p> <p>1.6. <i>Consultative processes</i> are used to obtain input to the plan in line with site requirements</p> <p>1.7. Inventory program is planned, documented and communicated in line with site requirements</p> <p>1.8. Necessary <i>approvals</i> are sought and obtained in line with site requirements</p>
2. Implement inventory program	<p>2.1. Inventory program is implemented in line with methods, schedule, budget and legislative</p>

ELEMENT	PERFORMANCE CRITERIA
	requirements
	2.2. Required <i>resources</i> and <i>authorisations</i> are coordinated and obtained in line with organisational and legislative requirements
	2.3. Schedule for assessment is communicated to coordinating personnel in line with organisational requirements
	2.4. <i>Communication</i> with others is established and maintained in line with OHS requirements
	2.5. <i>Documentation requirements</i> are identified and communicated in line with OHS requirements
3. Monitor assessment	3.1. <i>Monitoring points</i> are identified and adhered to in line with organisational procedures
	3.2. Assessment is <i>checked</i> to ensure compliance with environmental, OHS, organisational and legislative requirements
	3.3. Communication with coordinating personnel is maintained in line with OHS requirements
	3.4. Inventory program and assessment processes are amended as required to ensure specifications, quality and performance targets are met
4. Review assessment	4.1. Assessment is reviewed against inventory program and organisational requirements
	4.2. <i>Information</i> and data are analysed to determine effectiveness of assessment and improvements to future programs
	4.3. Recommendations for future programs are prepared, based on findings of analysis and consultation conducted
	4.4. Assessment processes are <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to select sampling techniques; create sampling designs;

REQUIRED SKILLS AND KNOWLEDGE

identify species growing in the target area; identify vegetation in reference texts; recognise common diseases, pests and nutritional deficiencies

- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others; present written and verbal information to a wide range of individuals and groups
- Literacy skills sufficient to analyse qualitative and quantitative information and data; prepare a range of reports, documentation and submissions where precise meaning is required; prepare site maps and plans; use and adapt complex maps and diagrams
- Problem solving skills sufficient to demonstrate effective time and project management

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and managing an inventory program
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of environmental impact, and the safe use and storage of chemicals
- Organisational and site standards, requirements, policies and procedures for planning and managing an inventory program
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Procedures for the development and implementation of a range of environmental management strategies
- Data collection and analysis methods
- Map and plan preparation techniques
- Characteristics and growth habits of local vegetation
- Identification of plant species and their ecological interactions with the environment
- Soil characteristics and topography of local area
- Use and application of appropriate survey and assessment equipment
- Statistical analysis techniques
- Sampling techniques applicable to forest assessments
- Problem identification and resolution strategies, and common fault finding techniques
- Principles of hydrology and the interaction/implications between forests/plantations and water use
- Established communication channels and protocols
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks

REQUIRED SKILLS AND KNOWLEDGE

- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can plan and manage an inventory program

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to planning and managing an inventory program
- following organisational policies and procedures relevant to planning and managing an inventory program
- planning an inventory program and forest assessment using consultative processes with colleagues and stakeholders to obtain inputs, and ensuring efficient and safe processes and timelines
- implementing an inventory program in line with documented plan and budget, and making adjustments to plan or program
- reviewing and analysing an inventory program and using findings to document improvements to future assessments
- preparing and presenting a detailed report, including costs, processes and analysis of findings of the program

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and

EVIDENCE GUIDE

environmental constraints

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements

may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination

RANGE STATEMENT

Organisational requirements may include:

- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Inventory program may be to:

- calculate the current and expected wood volume and yield within a forest
- set a monitoring process in place to enable reporting against marketing, strategic and business plans

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions
- hygiene of the area
- relevant commonwealth, state or territory, and local legislation and regulations

Timeline may be:

- critical to the productivity of the forest
- critical to the success of the program and assessment activities

Appropriate personnel may

- coordinating or operational personnel

RANGE STATEMENT

include:

- management
- colleagues
- clients
- relevant groups

Methods relate to:

- measurement and survey

and may include:

- use of geographic information systems (GIS)
- interpretation of aerial photography
- range of sampling techniques
- face-to-face meetings
- telephone
- facsimile
- written and email communication

Consultative processes may include:

and may be with:

- clients
- technical operators
- marketing groups
- coordinating or operational personnel
- colleagues
- relevant groups or bodies, such as environmental bodies; local, state or territory, and federal government bodies and agencies; internal policy groups; and labour force

Approvals:

may be required by:

- environmental bodies
- local, state or territory, and federal government bodies and agencies

and may include:

- long-term budget approvals

Resources may include:

- people
- material
- equipment and tools, including GIS and aerial photography

Authorisations may include:

- permits
- approvals
- licences relating to neighbouring sites or properties

and may relate to:

RANGE STATEMENT

- hours of operation
 - use and application of chemicals
 - the environment
- Communication** may include:
- regular communication with the operations and coordinating personnel to ensure smooth assessment processes and progress
- Documentation requirements** must be:
- clear and accurate and include:
- changes to the program or assessment process
 - performance criteria
 - supplementary approvals
 - supplementary notifications, which may involve creating or amending maps, plans, reports or forms
- Monitoring points** may be:
- time-based
 - frequency-based
- Checked** may include:
- following OHS, organisational, legislative and environmental regulations, procedures, practices and precautions
 - adherence to site environmental imperatives, specifications, quality, and performance targets
- Information** may relate to:
- and may include:
- the sample area
 - previous surveys and assessments
 - aerial photography
 - GIS data
 - previous reports
 - management information systems data
 - marketing
 - strategic and business plans and associated implementation plans
- Records and reports** may include:
- difficulties or issues faced during planning and implementing the inventory program or conducting forest assessments
 - recommendations for future work
 - results
 - costs
 - data analysis
- and may be:

RANGE STATEMENT

- manual
- a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM5208B Manage road construction and maintenance

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to plan for and implement road construction and maintenance procedures. Roads may include heavy duty, all weather logging roads through to unsurfaced earth roads

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM5208A Manage road construction and maintenance

Application of the Unit

Application of the unit The unit involves managing road construction and maintenance in a variety of work settings, including:

- forest environments
- agriculture
- workshops
- domestic
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan road construction and maintenance	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to managing road construction and maintenance are identified and followed</p> <p>1.2. <i>Logging</i> and <i>topography</i> details are obtained and assessed while applying <i>environmental management considerations</i></p> <p>1.3. <i>Road location</i>, design and <i>construction</i> requirements are identified and inspected to analyse costs, benefits and impact on the forest</p> <p>1.4. Timeframe for use of the road and likely weather conditions are checked</p> <p>1.5. Timber <i>extraction</i> methods and storage requirements for roads, tracks, equipment placement, falling and recovery rates, and delivery schedules are calculated and documented</p> <p>1.6. <i>Authorities</i> are consulted and approvals obtained for road development</p> <p>1.7. Formal road construction/maintenance plan is</p>

ELEMENT	PERFORMANCE CRITERIA
2. Implement road construction	<p>prepared for approval in line with site procedures and environmental requirements</p> <p>1.8. Communication with others is established and maintained in line with OHS requirements</p> <p>2.1. Road and track design and construction plan is clearly communicated to site personnel to enable preparation</p> <p>2.2. Personnel, material and equipment required for the construction are coordinated and scheduled in line with organisational guidelines</p> <p>2.3. Operational procedures for roads are planned with site personnel in line with design plan and environmental requirements</p> <p>2.4. Construction of roads and tracks is monitored and unexpected ground, water, vegetation or other environmental conditions are reported to appropriate personnel</p> <p>2.5. Technical assistance is provided to site personnel in preparing roads and tracks</p>
3. Maintain roads	<p>3.1. Roads and tracks are assessed for maintenance requirements and outcomes are recorded</p> <p>3.2. Personnel, material and equipment required for maintenance are coordinated and scheduled in line with organisational guidelines</p> <p>3.3. Site environmental conditions are adhered to in line with regulations</p> <p>3.4. Maintenance schedule for the site is organised in conjunction with operational personnel and source of equipment, taking seasonal weather conditions into consideration</p> <p>3.5. Operational staff, clients and contractors are communicated with throughout maintenance activities to ensure smooth operations</p>
4. Monitor and review road construction and maintenance	<p>4.1. Monitoring schedule is developed and adhered to in line with organisational policy and environmental requirements</p> <p>4.2. Checks are made to ensure OHS procedures are observed and followed and site environmental conditions are adhered to in line with regulations</p> <p>4.3. Checks are made in line with organisational policy to ensure that performance indicators, targets and specifications are being met and process or methods</p>

ELEMENT**PERFORMANCE CRITERIA**

are amended as required

4.4.Data and documentation from construction or maintenance activities are analysed against the plan in line with organisational guidelines

4.5.Recommendations are prepared, based on the analysis of data and feedback collected during the construction and maintenance process

4.6.Road construction and maintenance process is *recorded and reported to appropriate personnel*

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to manage road construction and maintenance
- Communication skills sufficient to obtain relevant approvals for road development; use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to coordinate and schedule resources, equipment and material; record and report workplace information; maintain documentation
- Numeracy skills sufficient to determine cost benefit analysis and environmental impact on proposed location, design and construction requirements
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing road construction and maintenance
- Environmental protection requirements, including the safe disposal of waste material, the cleaning of plant, tools and equipment, and the minimisation of environmental impact and noise
- Organisational and site standards, requirements, policies and procedures for managing road construction and maintenance
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently

REQUIRED SKILLS AND KNOWLEDGE

- Details of logging operations
- Log extraction methods
- Road construction and maintenance procedures
- Key features of road design and development
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently manage road construction and maintenance in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing road construction and maintenance
- following organisational policies and procedures relevant to managing road construction and maintenance
- managing road construction and maintenance in line with work order and within prescribed organisational tolerances
- coordinating development of roads in line with organisational requirements

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

- Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Logging** may include:
- activities covering a full range of species, log sizes, falling and retention densities
 - slope and other environmental conditions
 - cable systems usage, including:
 - high lead (no skyline)
 - standing skyline and a running skyline with hauling both uphill and downhill
 - logs attached to optimise payload without exceeding the lift or haul capacity of the system
- Topography** is to include:
- map of the designated area showing terrain levels
- Environmental management considerations** may include:
- ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees

RANGE STATEMENT

- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles

Road location is to include:

where roads are constructed, taking into account:

- site requirements
- topographic information
- environmental considerations

Construction is to include:

development method chosen to construct roads with:

- control points
- required grades
- water crossing points and structures

Extraction is to include:

methods of removing logs from the work site with mechanical equipment and cables, considering site conditions and specific log location, in an order that minimises downtime and risk of snags, breakages and hang-ups

Authorities are to include:

- local government councils
- shires with local planning and zoning authority for a given region

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

Material may include:

- road base
- gravel
- crushed rock
- sand and bluestone
- cords and pipes for water crossings

Equipment may include:

- earthmoving equipment

Maintenance

is the process of assessing road defects and

RANGE STATEMENT

Records and reports may include:

undertaking the necessary rectification work

- road construction and maintenance operations
- difficulties or issues faced
- environmental issues
- costs
- hazards
- incidents
- equipment malfunctions
- recommendations for future work
- results

and may be:

Appropriate personnel may include:

- manual
- a computer-based system
- other appropriate organisational communication system
- supervisors
- suppliers
- clients
- colleagues
- managers

Unit Sector(s)

Not Applicable

Competency field

Competency field

Forest Growing and Management

FPIFGM5210A Manage tending operations in a native forest

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit specifies the outcomes required to prepare and implement a tending operation within a managed native forest. It includes the conduct of consultative processes, analysis of the effectiveness of the operation, and presentation of findings to a range of individuals and groups

Compliance with licensing, legislative, regulatory or certification requirements including Codes of Practice may be required in various jurisdictions

This unit replaces FPIFGM5202A Manage tending operations in a native forest

Application of the Unit

Application of the unit

This unit involves managing tending operations in a native forest. It applies to a forest environment and involves application of skills and knowledge at a managerial level

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan tending operation	<p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational</i> requirements relevant to <i>tending operations</i> are identified and followed</p> <p>1.2. <i>Timeline</i> and budget are identified and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Environmental protection requirements</i> are identified and implemented</p> <p>1.4. <i>Operation requirements</i> are reviewed and analysed for inputs and <i>impact</i> on the overall plan in accordance with site requirements</p> <p>1.5. <i>Consultative processes</i> are used to obtain <i>input</i> to the plan in accordance with site requirements</p> <p>1.6. Tending plan is developed, documented and communicated in accordance with site requirements</p> <p>1.7. Necessary <i>approvals</i> are sought and obtained in accordance with site requirements</p>
2. Implement tending operation	<p>2.1. Tending operation is implemented in accordance with operation requirements, schedule, budget and legislative requirements</p> <p>2.2. Required resources and <i>authorisations</i> are coordinated and obtained in accordance with</p>

ELEMENT	PERFORMANCE CRITERIA
	organisational and legislative requirements
	2.3. Emergency treatments and <i>hazard</i> notification procedures are implemented in accordance with legislative requirements
	2.4. Schedule for site is organised in conjunction with technical operators in accordance with organisational requirements
	2.5. <i>Communication</i> with others is established and maintained in accordance with OHS and organisational requirements
	2.6. <i>Documentation requirements</i> are identified and communicated in accordance with OHS requirements
3. Monitor tending operation	3.1. <i>Monitoring points</i> are identified and adhered to in accordance with organisational procedures
	3.2. Tending operation is checked to ensure environmental, OHS, organisational and legislative <i>compliance requirements</i> are met and documentation is completed and submitted as required
	3.3. Communication with operations supervisor is maintained in accordance with OHS and organisational requirements
	3.4. Tending operation plan and processes are amended as required to ensure specifications, quality and performance targets are met
4. Review tending operation	4.1. Tending operation is reviewed against tending operation plan and organisational requirements
	4.2. <i>Information</i> and data is analysed to determine effectiveness of tending operation and improvements to future plans
	4.3. Recommendations for future operations are prepared based on findings of analysis and consultation conducted
	4.4. Native forest tending operations are <i>recorded and reported</i> to appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Communication skills sufficient to use consultative and interpersonal techniques and effectively present written and oral information to colleagues and a wide range of individuals and groups
- Literacy skills sufficient to accurately record and report workplace information and prepare a range of reports, documentation and submissions where precise meaning is required
- Numeracy skills sufficient to analyse qualitative and quantitative information and data
- Problem solving skills sufficient to demonstrate time and project management
- Planning and organisational skills to coordinate the acquisition of required resources, authorisations and approvals and to develop tending plans

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing tending operations in a native forest
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for managing tending operations in a native forest
- Impact of tending operations on forest productivity and various end products
- Biology of relevant forest health problems
- Tree growth and development
- Weed species and herbicide interactions
- Hydrology and hydrological principles
- Botany, including plant identification and classification skills
- Ecology and ecological interactions
- Soil types and structure
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance relevant to managing tending operations in a native forest
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can manage tending operations in a native forest

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to managing tending operations in a native forest
- following organisational policies and procedures relevant to managing tending operations in a native forest
- following applicable licensing or certification requirements
- planning a tending operation using consultative processes with colleagues and stakeholders to obtain inputs, and ensure efficient and safe processes and timelines
- implementing a tending operation in line with documented plan and budget, and making adjustments to plan or operation
- reviewing and analysing the operation and use of findings to document improvements to future operations
- preparing and presenting a detailed report including costs, processes and analysis findings of the tending operation

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than

EVIDENCE GUIDE

confirmatory questions, will usually be conducted in an off-site context

- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment methods applicable to this unit may include direct observation of tasks with questioning of required knowledge and the completion of projects, assignments or written tests
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in accordance with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in accordance with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements

- legal
- organisational and site guidelines

RANGE STATEMENT

may include:

- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)
- access and equity principles and practices
- may have the potential to impact on the organisation's public relations

Tending operations

and may be designed to:

- maintain the health of the stand
- improve productivity and long term sustainability
- provide for end product mix requirements
- manage notifiable weeds
- may be critical to the productivity of the forest, success of the operation, and on suitability for various forest products (e.g. pruning certification)

Timeline

Appropriate personnel may include:

- operations supervisor
- management
- colleagues
- clients
- relevant groups

Environmental protection requirements may include:

- soil disturbance measures
- retention tree damage
- fungal hygiene measures
- identification of habitat trees
- chemical handling and application procedures

Operation requirements may include:

- end product requirements
- stand treatment certification documentation
- contractual requirements and obligations
- environmental and public relations imperatives

RANGE STATEMENT

Impact may relate to:

- current state of the forest resource
- nature and size of the crop and non-crop species
- availability and skill level of the labour force
- face-to-face meetings
- telephone
- facsimile
- written
- email communication

Consultative processes may include:

and may be with:

- clients
- technical operators
- marketing groups
- operations supervisor
- colleagues

and relevant groups/bodies such as:

- environmental bodies
- local, State and federal government bodies and agencies
- internal policy groups
- labour force

Input may include:

- details of equipment
- methods and consumables to be used
- specifications for thinning
- weed/insect management
- stand health, pruning and tree selection
- necessary notifications of relevant groups/bodies
- specifications and quality parameters
- performance indicators

Approvals may be required by:

- environmental bodies
- local, State and federal government bodies and agencies

and may include:

- long-term budget approvals

Authorisations may include:

- permits
- approvals
- licences relating to neighbouring properties

RANGE STATEMENT

- and may relate to:
- hours of operation
 - use and application of chemicals
 - the environment
- Hazards** may refer to:
- use of chemicals
 - off-site effects
 - tools and equipment
 - dangers to the public
- Communication** will include:
- regular communication with the operations supervisor to ensure smooth operation and progress
- Documentation requirements** must be clear and accurate and may include:
- changes to the plan or process
 - supplementary approvals
 - supplementary notifications
- Monitoring points** may be time-based or frequency-based
- Compliance requirements** may include:
- OHS
 - organisational, legislative and environmental regulations procedures, practices and precautions
 - adherence to site environmental imperatives
 - specifications
 - quality
 - performance targets
- Information** may be from a variety of sources and include:
- legislation
 - forest biology
 - tree physiology
 - new technology
- Records and reports** may include:
- difficulties or issues faced during conduct of tending operation
 - recommendations for future work
 - results
 - costs
 - data analysis

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM5211A Coordinate stand nutrition

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit specifies the outcomes required to plan and monitor the nutrition of a stand of trees over time

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM5203A Coordinate stand nutrition

Application of the Unit

Application of the unit

This unit involves coordination of stand nutrition in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan stand nutrition	<p>1.1.Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational</i> requirements relevant to coordinating <i>stand nutrition</i> are identified and followed</p> <p>1.2.Site <i>environmental requirements</i> are identified and complied with</p> <p>1.3.Relevant <i>information</i> is obtained, analysed and assessed for impacts on stand nutrition planning</p> <p>1.4.<i>Method(s)</i> of ensuring adequate and appropriate level of stand nutrition is/are selected</p> <p>1.5.Measurable performance indicators, specifications and targets are determined and documented</p> <p>1.6.Required <i>approvals</i> are identified, sought and obtained from relevant authorities</p> <p>1.7.Stand nutrition <i>plan</i> and its performance indicators are clearly documented and communicated to <i>appropriate personnel</i></p>
2. Implement and monitor stand nutrition	<p>2.1.Resources required for fertiliser application are coordinated and scheduled and required <i>documentation</i> is clearly and accurately completed</p> <p>2.2.Schedule for the site is organised and liaison with relevant <i>individuals/bodies/groups</i> is conducted as required using appropriate interpersonal techniques</p> <p>2.3.Stand nutrition plan is implemented, monitored and issues are identified and addressed</p> <p>2.4.Systematic <i>checks</i> are carried out to ensure</p>

ELEMENT**PERFORMANCE CRITERIA**

- compliance requirements relevant to stand nutrition activities are adhered to
- 2.5. **Communication** with others is established and maintained in line with OHS and organisational requirements
- 2.6. Adjustments to the stand nutrition plan are made as required and communicated to appropriate personnel
- 2.7. Potential and existing risks and **hazards** in the work area are identified and controlled
- 2.8. **Limitations** are identified and assistance sought as required in line with workplace procedures
3. Monitor tending operation
- 3.1. Data/documentation from stand nutrition is assessed and evaluated to confirm techniques, methodologies and budgets are in line with the plan
- 3.2. Issues and impediments to stand nutrition activities and program costs are identified and documented
- 3.3. A cost/benefit analysis is prepared and recommendations made based on the analysis of data and identified issues
- 3.4. **Report** is prepared in the appropriate style and format and processed in line with workplace procedures
- 3.5. Results of stand nutrition are clearly communicated and/or disseminated to appropriate personnel
- 3.6. Workplace records and documentation are completed and **maintained** in line with workplace procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to interpret and act on written information including maps, plans, reports and aerial photography and to recognise common diseases, pests, and nutrition deficiencies

REQUIRED SKILLS AND KNOWLEDGE

- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others including landholders and internal/external bodies and groups and to supervise operational staff and/or contractors to achieve specific organisation outcomes
- Literacy skills sufficient to accurately complete data and write reports and submissions in appropriate style and format and to accurately record and maintain information
- Numeracy skills sufficient to provide and interpret data, costings and calculations relating to time, financial information, weights, volumes and lengths
- Problem solving skills sufficient to issues and limitations to stand activities and demonstrate appropriate response procedures and to assess and extract critical information from various sources (legislation, manufacturer's recommendations, standards, codes of practice)
- Planning and organisational skills sufficient to coordinate and schedule operations and to identify and acquire relevant approvals

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for coordinating stand nutrition
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for processes for coordinating stand nutrition
- Fertiliser technology and options
- Nutrition requirements of target species
- Biology of target species
- Hydrology and hydrological principles
- Botany, including plant identification and classification skills
- Ecology and ecological interactions
- Soil types and structure
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance relevant to coordinating stand nutrition
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can coordinate stand nutrition

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS, environmental and organisational policies and procedures, relevant to coordinating stand nutrition
- following organisational policies and procedures relevant to coordinating stand nutrition
- effective communication and interpersonal techniques with colleagues and others
- determining measurable performance indicators, specifications and targets and developing a stand nutrition plan within specified budgetary guidelines
- coordinating and scheduling of resources and managing the work of others to achieve specific outcomes
- monitoring the provision of stand nutrition and ensuring relevant legal, OHS and environmental requirements are complied with
- documenting results from stand nutrition operation and reporting preparation for dissemination to relevant personnel

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or

EVIDENCE GUIDE

Australian Standards requirements

- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment methods applicable to this unit may include direct observation of tasks with questioning of required knowledge and the completion of projects, assignments or written tests
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may

- legal
- organisational and site guidelines

RANGE STATEMENT

include:

- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)
- access and equity principles and practices
- used to improve the marketability of the stand

Stand nutrition may be:

Environmental requirements may relate to:

- hygiene of the area
- relevant national, State and local legislation and/or regulations

Information may include:

- aerial photo interpretation
- ground surveys

Method(s) may include:

- pruning using mechanical or hand tools
- the use of chemicals or biological agents

Approvals may be:

- required where the use of chemicals or biological agents is intended

Plan may detail:

- organisational terminology
- guidelines
- budgets
- policies and timelines
- internal memos
- resources (people, materials, equipment)

Appropriate personnel may include:

- operational personnel
- clients
- colleagues
- sub-contractors
- line management
- relevant external authorities and agencies

Documentation may include:

- maps
- plans

RANGE STATEMENT

- reports
 - forms
 - neighbouring landholders
- Individuals/bodies/groups** may include:
- Checks** may ensure that:
- relevant organisational OHS procedures, practices, policies and precautions are observed and followed
 - site environmental requirements comply with relevant national, State and local legislation and/or regulations
 - performance indicators, targets and specifications are met
 - the quantity, cost and provenances collected accord with plan specifications
 - required organisational documentation is completed clearly and accurately
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Hazards** may include:
- the use of chemicals and/or biological agents
 - infrastructure in the vicinity of stand, such as powerlines
- Limitations** may relate to:
- job role and responsibilities
 - own competency level
 - industry requirements
 - own understanding of risk identification processes
 - own interpretation of legislation, regulations and procedures
- Report** may document:
- difficulties or issues faced
 - recommendations for future work
 - results
 - costs
 - data analysis

RANGE STATEMENT**Maintenance** may include:

- collation (of information or documentation)
- interpreting information in a way relevant to workplace requirements
- organising and maintaining accurate records
- utilising a full range of information media (written/printed, oral, electronic, visual display units/personal computers)

Unit Sector(s)

Not Applicable

Competency field**Competency field** Forest Growing and Management

FPIFGM5212A Manage genetic resources

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to manage the propagation process using sexual and asexual methods and tending nursery plants. It includes the propagation methods of seeding, cuttings, grafting, tissue culture and layering

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Applicable legislation - Plant Breeders Rights Act 1994

This unit replaces FPIFGM5204A Manage genetic resources

Application of the Unit

Application of the unit

The unit involves managing genetic resources in a forest environment or settings such as farms, agriculture, workshops, domestic, nursery, local council applications, as applicable to the unit

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan propagation	<p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to managing <i>genetic resources</i> are identified and followed</p> <p>1.2. Genetic resource policies and marketing plans for the organisation are reviewed and analysed for impact on the <i>propagation</i> and <i>tending</i> planning process</p> <p>1.3. Quantities, timing, <i>provenances</i>, <i>species</i> and desirable <i>characteristics</i> are selected in line with organisational policies and guidelines</p> <p>1.4. Specifications and targets for production quantities, timing, provenances and species are specified and documented in line with organisation guidelines</p> <p>1.5. Site <i>environmental protection measures</i> are monitored in line with relevant legislation and regulations</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS and organisational requirements</p>
2. Implement genetic resource management	<p>2.1. Method of propagation is selected in line with local environment and organisation guidelines</p>

ELEMENT	PERFORMANCE CRITERIA
plan	<p>2.2. Permits or licences required for production, collection and management of genetic resources are obtained</p> <p>2.3. <i>Operational activities</i> including hygiene, propagation bed preparation and environmental considerations are directed</p> <p>2.4. People, materials, <i>tools and equipment</i> required for propagation are coordinated and scheduled in line with organisational guidelines</p> <p>2.5. Genetic resource management plan and propagation strategy are coordinated to establish the plant stock</p> <p>2.6. Nursery staff are informed of the plan, propagation methods and tending requirements</p>
3. Monitor and review genetic resource management plan	<p>3.1. Environmental protection measures for propagation, soil and drainage are inspected for correct implementation</p> <p>3.2. Regular communication is conducted with operational staff, clients and contractors during the propagation phase to ensure smooth operation and progress</p> <p>3.3. Operational activities are <i>monitored</i> and reviewed for potential improvements</p> <p>3.4. Propagation method is reviewed and diagnosed for potential improvements</p> <p>3.5. Genetic resource management results are <i>recorded and reported</i> in line with site and organisational requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Plant propagation skills for a range of propagation techniques
- Communication skills and interpersonal techniques sufficient to interact

REQUIRED SKILLS AND KNOWLEDGE

appropriately with colleagues and others in the workplace

- Literacy skills sufficient to accurately record and maintain information relating to genetic resource management
- Numeracy skills sufficient to schedule resources, materials and equipment required for propagation
- Problem solving skills sufficient to identify problems and demonstrate appropriate response procedures
- Planning and organisational skills sufficient to efficiently and safely implement a genetic resource management plan, and organise and obtain required permits or licences

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing genetic resources
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for managing genetic resources
- Propagation and planning
- Genetic resources and tending strategies
- Regeneration principles and methods
- Hydrology and hydrological principles
- Botany, including plant identification and classification skills
- Ecology and ecological interactions
- Soil types and structure
- Nursery hygiene and sterilisation techniques
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance relevant to managing genetic resources
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can manage genetic resources within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to managing genetic resources
- following organisational policies and procedures relevant to managing genetic resources
- effective communication and safe work practices
- managing genetic resources in line with regulations and organisational requirements
- coordinating personnel to follow planning, communications and scheduling for genetic resource management activities

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

workplace relevant contexts) together with application of required knowledge

- Assessment methods applicable to this unit may include direct observation of tasks with questioning of required knowledge and the completion of projects, assignments or written tests
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and

RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- nursery hygiene

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements

RANGE STATEMENT

- equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Genetic resources** are to include:
- sexual and asexual plant species
- Propagation** is to include:
- the natural process of breeding new plants from the parent stock using seeds, cuttings, grafting, tissue cultures and layering
- Tending** is to include:
- the process of regularly checking the plants and the propagation method to aid and promote plant growth
- Provenances** are to include:
- the place of origin that the plant or propagation method comes from
- Species** may include:
- native species of one or more types
 - imported species
- Characteristics** may include:
- growth rate
 - branch angle
 - branch height
 - timber density
- Environmental protection measures** may include:
- fungal and insect control measures
- and action to limit impacts on:
- selected forest vegetation
 - habitat
 - soil and water features
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Operational activities** may include:
- propagation
 - planting and tending of the genetic resources
- Tools and equipment** may include:
- conveyors
 - mixing equipment

RANGE STATEMENT

- refrigeration units
- cool store, mobile beds
- elevated growing platforms
- automated seeding equipment
- fork lifts
- tractors
- spray equipment
- hand tools
- glasshouses
- covered beds
- irrigation systems
- hoses
- plumbing fittings
- trolleys
- seedling pots or trays
- artificial media
- potting mix
- soil
- sterilisation chamber
- personal protective equipment and clothing such as visibility vest, safety boots, spray masks, safety glasses
- should be performed at key stages of plant development

Monitored

and may include:

- health and condition of seedlings
- water
- nutrients
- weeds
- rate of development

Records and reports

may be detailed reports outlining the management of genetic resources and regeneration processes and outcomes including:

- difficulties
- recommendations for future work
- results
- costs
- data analysis
- evaluation of outcomes
- information on health and condition of

RANGE STATEMENT

seedlings

- seedling treatments
- water volume administered

and may be:

- manual
- using a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM5213A Coordinate plantation tending operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit specifies the outcomes required to prepare and implement a tending operation in a plantation. It includes the conduct of consultative processes, analysis of the effectiveness of the operation and presentation of findings to a range of individuals and groups

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

There may be applicable Codes of Practice governing tending operations in some areas

This unit replaces FPIFGM5205A Coordinate plantation tending operations

Application of the Unit

Application of the unit

This unit involves coordinating plantation tending operations in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan tending operation	<p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to plantation <i>tending operations</i> are identified and followed</p> <p>1.2. <i>Timeline</i> and budget are identified and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Operation requirements</i> are reviewed and analysed for inputs and <i>impact</i> on the overall plan in line with site requirements</p> <p>1.4. <i>Consultative processes</i> are used to obtain <i>input</i> to the plan in line with site requirements</p> <p>1.5. Tending plan is developed, documented and communicated in line with site requirements</p> <p>1.6. Necessary <i>approvals</i> are sought and obtained in line with site requirements</p>
2. Implement tending operation	<p>2.1. Tending operation is implemented in line with plan, schedule, budget and legislative requirements</p> <p>2.2. Required <i>resources</i> and <i>authorisations</i> are coordinated and obtained in line with site and legislative requirements</p> <p>2.3. Emergency treatments and <i>hazard</i> notification procedures are implemented in line with legislative</p>

ELEMENT	PERFORMANCE CRITERIA
	requirements
	2.4. Schedule for site is organised in conjunction with technical operators in line with site requirements
	2.5. <i>Communication</i> with others is established and maintained in line with OHS and organisational requirements
	2.6. <i>Documentation requirements</i> are identified and communicated in line with OHS requirements
3. Monitor tending operation	3.1. <i>Monitoring points</i> are identified and adhered to in line with organisational procedures
	3.2. <i>Compliance requirements</i> are checked to ensure tending operation is compliant with environmental, OHS, organisational and legislative requirements and documentation is completed and submitted as required
	3.3. Communication with operations supervisor is maintained in line with OHS and organisational requirements
	3.4. Tending operation plan and processes are amended as required to ensure specifications, quality and performance targets are met
4. Review tending operation	4.1. Tending operation is reviewed against documented plan and site requirements
	4.2. <i>Information</i> and data is analysed to check effectiveness of tending operation and improvements to future plans
	4.3. Recommendations for future operations are prepared based on findings of analysis and consultation conducted
	4.4. Plantation tending operations are <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to accurately prepare a range of reports, documentation and submissions where precise meaning is required
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to present written and oral information to a wide range of individuals and groups
- Numeracy skills sufficient to analyse qualitative and quantitative information and data
- Problem solving skills sufficient to demonstrate time and project management
- Planning and organisational skills sufficient to coordinate and schedule operations and to coordinate required resources and authorisations

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for coordinating tending operations in a plantation
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for coordinating tending operations in a plantation
- Problem identification and resolution
- Procedures for the development and implementation of a range of environmental management strategies
- Impact of tending operations on forest productivity and various end products
- Biology of relevant forest health problems
- Tree growth and development
- Weed species and herbicide interactions
- Hydrology and hydrological principles
- Botany, including plant identification and classification skills
- Ecology and ecological interactions
- Soil types and structure
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance relevant to coordinating plantation tending operations
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can coordinate plantation tending operations

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to coordinating tending operations
- following organisational policies and procedures relevant to coordinating tending operations
- planning a tending operation using consultative processes with colleagues and stakeholders to obtain inputs, and ensuring efficient and safe processes
- safely implementing a tending operation in line with documented plan and budget, and making adjustments to plan or operation
- reviewing and analysing operation and use of findings to document improvements to future operations
- preparing and presenting a detailed report including costs, processes and analysis findings of the tending operation

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements

EVIDENCE GUIDE

- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment methods applicable to this unit may include direct observation of tasks with questioning of required knowledge and the completion of projects, assignments or written tests
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- Codes of Practice
- environmental management requirements including waste disposal, recycling and re-use guidelines

Environmental requirements

may include:

and may be related to:

- road, river/stream reserves

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity

RANGE STATEMENT

Organisational requirements may include:

- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Tending operations

- may have the potential to impact on the site's public relations

and may be designed to:

- maintain the health of the stand
- improve productivity and long-term sustainability
- provide for end product mix requirements
- manage notifiable weeds

Timeline may be critical to:

- the productivity of the forest
- success of the operation
- suitability for various forest products (e.g. pruning certification)

Appropriate personnel may include:

- operations supervisor
- management
- colleagues
- clients
- relevant groups

Operation requirements may include:

- end product requirements
- stand treatment certification documentation
- contractual requirements and obligations

RANGE STATEMENT

Impact may relate to:

- environmental and public relations imperatives
- current state of the forest resource
- nature and size of the crop and non-crop species
- availability and skill level of the labour force
- face-to-face meetings
- telephone
- facsimile
- written and email communication

Consultative processes may include:

and may be with:

- clients
- neighbours
- technical operators
- marketing groups
- operations supervisor
- colleagues
- relevant groups/bodies such as environmental bodies
- local, State and federal government bodies and agencies
- internal policy groups
- labour force

Input may include:

- details of equipment
- methods and consumables to be used
- specifications for thinning
- weed/insect management
- stand health, pruning and tree selection
- necessary notifications of relevant groups/bodies
- specifications and quality parameters
- performance indicators

Approvals may be required by:

- environmental bodies
- local, State and federal government bodies and agencies

and may relate to:

- long-term budget

Resources may include:

- people
- materials and equipment

Authorisations may include:

- permits

RANGE STATEMENT

- approvals
- licences relating to neighbouring properties

and may relate to:

- hours of operation
- use and application of chemicals
- the environment

Hazards may include:

- use of chemicals
- off-site effects
- tools and equipment
- dangers to the public

Communication may include:

- regular communication with the operations supervisor to ensure smooth operation and progress

Documentation requirements

must be clear and accurate and may include:

- changes to the plan or process
- supplementary approvals
- supplementary notifications

Monitoring points

- should be performed at key stages of the process

Compliance requirements may include:

- OHS
- organisational
- legislative and environmental regulations
- procedures
- practices and precautions
- adherence to site environmental imperatives
- specifications
- quality
- performance targets

Information

may be from numerous sources and include:

- legislation
- forest biology
- tree physiology
- new technology

Records and reports may relate to:

- difficulties or issues faced during conduct of tending operation
- recommendations for future work
- results
- costs

RANGE STATEMENT

- data analysis

and may be:

- manual
- using a computer-based system
- other appropriate organisational system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM5214A Develop a native forest regeneration plan

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and implement the regeneration or revegetation of an area of native forest for timber production. It includes conducting consultative processes and evaluation of the effectiveness of the regeneration plan against organisational marketing, strategic and business objectives

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

There may be Codes of Practice to be followed in different forest types and forest areas

This unit replaces FPIFGM5206A Develop a native forest regeneration plan

Application of the Unit

Application of the unit

This unit involves developing a native forest regeneration plan in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------------|--|
| 1. Prepare regeneration plan | <p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational</i> requirements relevant to <i>native forest regeneration</i> are identified and followed</p> <p>1.2. <i>Relevant plans</i> and budgets are reviewed, analysed and considered for impact on regeneration planning</p> <p>1.3. <i>Method of regeneration</i> and trees are selected in line with broad policies and site requirements</p> <p>1.4. <i>Consultative processes</i> are used to obtain input to the plan in line with site requirements</p> <p>1.5. Regeneration plan is developed, documented and communicated in line with site requirements</p> <p>1.6. Necessary <i>approvals</i> are sought and obtained in line with site requirements</p> |
| 2. Implement regeneration plan | <p>2.1. Regeneration plan is implemented in line with schedule, budget and legislative requirements</p> <p>2.2. Required <i>resources</i> and <i>authorisations</i> are coordinated and obtained in line with site and legislative requirements</p> <p>2.3. Schedule for site is organised in conjunction with</p> |

ELEMENT**PERFORMANCE CRITERIA**

- operational personnel in line with site requirements
- 2.4. **Communication** with others is established and maintained in line with OHS and organisational requirements
- 2.5. **Documentation** is completed in a format suitable for analysis in line with OHS requirements
3. Monitor forest regeneration
- 3.1. **Monitoring points** and processes are determined and adhered to in line with site procedures
- 3.2. Forest regeneration is checked to ensure environmental, OHS, organisational and legislative **compliance requirements** are met, and documentation is completed and submitted as required
- 3.3. Regeneration plan and processes are amended as required to ensure performance indicators, targets and specifications are met
4. Review forest regeneration
- 4.1. Forest regeneration is reviewed against regeneration plan and site requirements
- 4.2. **Information** and data is analysed to determine effectiveness of forest regeneration and improvements to future plans
- 4.3. Recommendations for future regeneration are prepared based on findings of analysis and consultation
- 4.4. Regeneration planning processes are **recorded and reported** to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to accurately interpret aerial photography and to accurately identify common diseases, pests and nutritional deficiencies
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to accurately prepare a range of reports, documentation and submissions where precise meaning is required
- Numeracy skills sufficient to efficiently analyse qualitative and quantitative information and data
- Problem solving skills sufficient to demonstrate effective time and project planning and management
- Planning and organisational skills sufficient to coordinate and obtain required resources and authorisations and coordinate and schedule regeneration plans

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for developing a native forest regeneration plan
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for developing a native forest regeneration plan
- Biology of the target species
- Hydrology and hydrological principles
- Botany, including plant identification and classification skills
- Ecology and ecological interactions
- Seed collecting and distribution seasons for the target species
- Organisational marketing, business and strategic plans
- Original and potential ecosystems for the target area
- Common diseases, pests and nutritional deficiencies
- Soil types and structure
- A range of forest regeneration techniques
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance relevant to developing a native forest regeneration plan
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence and demonstrate that they can safely and efficiently plan, implement and review a native forest regeneration operation

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to native forest regeneration and compliance with organisational policies and procedures relevant to forest regeneration
- planning a native forest regeneration operation using consultative processes with colleagues and stakeholders to determine performance criteria, specifications and targets, and ensure efficient and safe processes and timelines
- safely implementing forest regeneration activities in line with documented plan and budget, and making adjustments to the plan or operation
- reviewing and analysing operation and using findings to document improvements to future operations
- preparing a detailed report including costs, processes and analysing findings of the regeneration operation

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to

EVIDENCE GUIDE

Method of assessment

- undertaking work applicable to this unit
- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment methods applicable to this unit may include direct observation of tasks with questioning of required knowledge and the completion of projects, assignments or written tests
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised***

RANGE STATEMENT

wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- legal

Organisational requirements may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance

RANGE STATEMENT

- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Native forest regeneration

- will be in line with organisational marketing plan and local environmental imperatives

Relevant plans may include:

- marketing plans
- strategic plans
- business plans

Method of regeneration may include:

- prescription burning
- infill planting to support directional natural regeneration
- pathways (such as after gap harvesting)
- direct seeding
- crop tree retention

Consultative processes may include:

- face-to-face meetings
- telephone
- facsimile
- written and email communication

and may be with:

- clients
- neighbours
- relevant groups/bodies such as environmental bodies
- local, State and federal government bodies and agencies
- local interest/lobby groups
- friends' groups
- representatives of industry bodies

Approvals may be required by:

- environmental bodies
- local, State and federal government bodies and agencies

and may refer to:

RANGE STATEMENT

- Resources** may include:
- long-term budget approvals
 - people
 - materials
 - equipment
- Authorisations** may include:
- permits
 - approvals
 - licences relating to neighbouring properties
- and may relate to:
- hours of operation
 - use and application of chemicals
 - the environment
- Communication** may include: regular communication with:
- individuals
 - groups and bodies
 - operational staff
 - clients
- Documentation** must be clear and accurate and may include:
- changes to the plan or process maps
 - plans and reports
 - supplementary approvals
 - supplementary notifications
- Monitoring points** should be performed at key stages of the process
- Compliance requirements** may include: compliance with:
- OHS, organisational, legislative and environmental regulations, procedures, practices and precautions
- and adherence to:
- site environmental imperatives
 - performance indicators
 - targets
 - specifications
- Information** may be: extracted from various sources and may include:
- legislation
 - forest biology
 - tree physiology
 - new technology

RANGE STATEMENT

Records and reports may refer to:

- aerial photos
- difficulties or issues faced during conduct of forest regeneration
- recommendations for future work
- results
- costs
- data analysis

and may be:

- manual
- using a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Forest Growing and Management

FPIFGM5215A Breed trees

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to improve yield through improved tree breeding. It includes conducting consultative processes and monitoring and analysis of the effectiveness of the breeding

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM5207A Breed trees

Application of the Unit

Application of the unit The unit involves breeding trees in a forest environment or settings such as farms, agriculture, workshops, domestic, nursery, local council applications, as applicable to the unit

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------|--|
| 1. Plan tree breeding | <p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational</i> requirements relevant to <i>tree breeding</i> are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are identified and adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Timeline</i> and budget are identified and checked with <i>appropriate personnel</i></p> <p>1.4. Organisational strategic and marketing plans are reviewed and analysed to identify impact on tree breeding operation</p> <p>1.5. <i>Consultative processes</i> are used to obtain input to the plan in line with <i>operational requirements</i></p> <p>1.6. Desirable <i>breeding characteristics</i> are identified for the breeding plan</p> <p>1.7. Appropriate <i>reproduction techniques</i> are selected to optimise propagation of the trees</p> <p>1.8. Breeding plan is developed, documented and communicated in line with organisational requirements</p> |
|-----------------------|--|

ELEMENT	PERFORMANCE CRITERIA
2. Implement breeding operation	<p>1.9.Necessary approvals are sought and obtained in line with organisational requirements</p> <p>2.1.Breeding operation is implemented in line with schedule, budget and legislative requirements</p> <p>2.2.Required resources and authorisations are obtained in line with organisational and legislative requirements</p> <p>2.3.Schedule for site is organised in conjunction with technical operators in line with organisational requirements</p> <p>2.4.Communication with others is established and maintained in line with OHS and organisational requirements</p> <p>2.5.Documentation requirements are identified and recorded in line with OHS requirements</p>
3. Monitor tree breeding	<p>3.1.Monitoring points are identified and adhered to in line with organisational procedures</p> <p>3.2.Breeding operation is checked to ensure environmental, OHS, organisational and legislative compliance requirements are met, and documentation is completed and submitted as required</p> <p>3.3.Communication with operations supervisor is maintained in line with OHS and organisational requirements</p> <p>3.4.Breeding plan and processes are amended as required to ensure specifications, quality and performance targets are met</p>
4. Review tree breeding	<p>4.1.Tree breeding operation is reviewed against breeding plan and organisational requirements</p> <p>4.2.Information and data is analysed to determine effectiveness of breeding operation and improvements to future plans</p> <p>4.3.Recommendations for future operations are prepared based on findings of analysis and consultation</p> <p>4.4.Tree breeding operation is recorded and reported to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to implement pollination techniques and to recognise common diseases, pests and nutrition deficiencies
- Communication skills sufficient to use appropriate consultative and interpersonal techniques with colleagues and others, and to effectively present written and oral information to a wide range of individuals and groups
- Literacy skills sufficient to prepare a range of reports, documentation and submissions where precise meaning is required
- Numeracy skills sufficient to analyse qualitative and quantitative information and data
- Problem solving skills sufficient to demonstrate time and project management
- Planning and organisational skills sufficient to develop a breeding plan and to acquire necessary approvals, resources and authorisations

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for breeding trees
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for breeding trees
- Data collection and analysis methods
- Flowering times for target species
- Reproduction techniques for target species
- Pollination techniques
- Desirable features for selection of breeding stock
- Genetic characteristics of target species
- Hydrology and hydrological principles
- Botany, including plant identification and classification skills
- Ecology and ecological interactions
- Soil types and structure
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance relevant to breeding trees
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks

REQUIRED SKILLS AND KNOWLEDGE

- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can breed trees

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to breeding trees
- following organisational policies and procedures relevant to breeding trees
- planning a tree breeding operation using consultative processes with colleagues and stakeholders to obtain inputs and ensure efficient and safe processes and timelines
- safely implementing a tree breeding operation in line with documented plan and budget, and making adjustments to plan or operation
- reviewing and analysing breeding operation and using findings to document improvements to future operations
- preparing and presenting a detailed report including costs, processes and analysing findings of the breeding operation

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than

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confirmatory questions, will usually be conducted in an off-site context

- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment methods applicable to this unit may include direct observation of tasks with questioning of required knowledge and the completion of projects, assignments or written tests
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- heritage and traditional land owner issues

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- legal

Organisational requirements

RANGE STATEMENT

may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Tree breeding

- may be to improve the yield and form of trees through improved breeding

Environmental protection measures may relate to:

- hygiene of the area
- relevant national, State and local legislation and regulations
- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles

and may include:

- contingencies for modifying operations during wet or other adverse weather conditions

Timeline may be critical to:

- the productivity of the forest
- success of the operation
- suitability for various forest products (e.g. pruning certification)

Appropriate personnel may include:

- operations supervisor
- management
- colleagues
- client
- relevant groups

RANGE STATEMENT

Consultative processes may include:

- face-to-face meetings
- telephone
- facsimile
- written and email communication

and may be with:

- clients
- technical operators
- marketing groups
- operations supervisor
- colleagues
- relevant groups/bodies such as environmental bodies
- local, State and federal government bodies and agencies
- internal policy groups
- labour force

Operational requirements may include:

- end product requirements
- stand treatment certification documentation
- contractual requirements and obligations
- environmental and public relations imperatives
- current state of the forest resource

Breeding characteristics may include:

- growth rate
- tree form
- branch angle
- fibre length
- fibre orientation
- extractive content
- salt tolerance
- drought tolerance
- density

Reproduction techniques may include:

- self and cross pollination
- cuttings
- grafting
- layering
- stolons
- suckers

Approvals may be required by:

- environmental bodies
- local, State and federal government bodies and agencies

RANGE STATEMENT

- and may refer to:
- long-term budget approvals
- Resources** may include:
- people
 - materials
 - equipment
- Authorisations** may include:
- permits
 - approvals
 - licences relating to neighbouring properties
- and may refer to:
- hours of operation
 - use and application of chemicals
 - the environment
- Communication** may include:
- regular communication with the operations supervisor to ensure smooth operation and progress
- Documentation requirements** must be clear and accurate and may include:
- changes to the plan or process
 - supplementary approvals
 - supplementary notifications
- Monitoring points**
- should be performed at key stages of the process
- Compliance requirements** may include:
- OHS
 - organisational, legislative and environmental regulations, procedures, practices and precautions
- and adherence to:
- site environmental imperatives
 - specifications
 - quality
 - performance targets
- Information** may be from numerous sources and include:
- legislation
 - forest biology
 - tree physiology
 - new technology
- Records and reports** may refer to:
- difficulties or issues faced during planning and implementation of tree breeding operation
 - recommendations for future work

RANGE STATEMENT

- results
- costs
- data analysis

and may be:

- manual
- using a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM5216A Manage coupe planning

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to manage the planning of forest coupe establishment, harvesting and regeneration

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

There may be Codes of Practice applicable to coupe planning in some areas and for some forest types

This unit replaces FPIFGM5209A Manage coupe planning

Application of the Unit

Application of the unit This unit involves managing coupe planning in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan coupe establishment	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational</i> requirements relevant to coupe planning are identified and followed</p> <p>1.2. <i>Local authority</i> coverage, <i>land owning</i> and <i>boundaries</i> are established and assessed</p> <p>1.3. Coupe location including map and grid references is checked</p> <p>1.4. Land use <i>zoning</i> is identified or applied for</p> <p>1.5. <i>Planning permits</i> are applied for</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS and organisational requirements</p>
2. Plan coupe harvesting	<p>2.1. Forest type, available <i>species</i> and <i>topography</i> are analysed and documented in line with plan and site procedures</p> <p>2.2. <i>Gross area</i> of coupe is calculated and <i>net area</i> to be <i>harvested</i> is established</p> <p>2.3. <i>Volume</i> estimates are calculated and reported</p>

ELEMENT	PERFORMANCE CRITERIA
3. Plan coupe regeneration	<p>2.4. <i>Operational activities</i> including site preparation, environmental considerations and access are planned</p> <p>2.5. Harvesting and <i>cartage</i> contracts are let for tender and issued and cartage routes are set</p> <p>2.6. Schedule for harvesting is produced, checked and communicated</p> <p>3.1. <i>Regeneration</i> method is selected to best suit the <i>site conditions</i></p> <p>3.2. <i>Environmental protection measures</i> for the landscape, soil and drainage are planned and instigated</p> <p>3.3. <i>Seeding process</i> or seedling planting regime is created and scheduled</p> <p>3.4. <i>Silviculture</i> systems are planned and scheduled</p> <p>3.5. Management of coupe planning is <i>recorded and reported</i> to appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to select regeneration methods, create and schedule seeding processes or seedling regimes and planning silviculture systems
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information, maintain documentation and read and interpret maps
- Numeracy skills sufficient to estimate and calculate volume, gross and net areas
- Problem solving skills sufficient to identify problems and demonstrate appropriate response procedures
- Planning and organisational skills sufficient to organise and obtain required permits and to plan and implement coupe establishment, harvesting and regeneration processes

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing coupe planning
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for managing coupe planning
- Coupe establishment and planning
- Harvesting methodologies
- Regeneration principles and methods
- Hydrology and hydrological principles
- Botany, including plant identification and classification skills
- Ecology and ecological interactions
- Soil types and structure
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance for coupe planning
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently manage coupe planning within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

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- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS, environmental and organisational policies and procedures, relevant to managing coupe planning
 - following organisational policies and procedures relevant to managing coupe planning
 - effective communication and safe work practices
 - managing coupe planning in line with regulations and organisational requirements
 - planning for the establishment, harvest and regeneration of forest coupes in line with site conditions, regulations and organisational requirements
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to comply with relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment methods applicable to this unit may include direct observation of tasks with questioning of required knowledge and the completion of projects, assignments or written tests
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related

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conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and

RANGE STATEMENT

substances

- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Local authorities are to include:

- local government councils or shires with local planning and zoning authority for a given region

Land owning is to include:

- the process of notifying and obtaining owner approval to commence harvesting operations

RANGE STATEMENT

- Boundaries** are to include:
- designated forest allotments owned privately, by government or by the forestry organisation; boundaries fall within survey pegs for the land allocated
- Zoning** is to include:
- designated forest coupes owned privately, by government or by the forestry organisation with boundaries that fall within survey pegs for the land allocated for forest growing and harvesting operations under local authority allocation
- Planning permits** are to include:
- permits granted by local authorities for forest growing and harvesting operations to take place based on approved plans submitted to local government complying with all required regulations
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Species** may include:
- native species of one or more types
 - imported species
- Topography** is to include:
- a map of the designated area showing terrain levels
 - contours
 - elevations
 - slopes
 - gullies and adjoining land parcels
 - rainfall
 - soil type
- Gross area** is to include:
- the total area mass of the planned forest coupe
- Net area** is to include:
- the total area of forest available for harvesting excluding streamside
 - buffers
 - filter strips
 - habitat protection areas

RANGE STATEMENT

- rainforest protection
 - excluded areas
 - roads
 - tracks and landings
- Harvesting** is to include:
- the methods of cutting and extracting trees and logs from designated areas
- Volume** is to include:
- the estimated return of cubic metres or tonnes of timber for each of sawlogs, pulpwood or firewood
- Operational activities** may include:
- coupe map details
 - site preparation
 - streamside buffers
 - filter strips
 - contours
 - gullies
 - crossing points
 - habitat protection
 - rainforest protection
 - flora and fauna protection
 - landscape protection
 - excluded areas
 - rubbish removal
 - permanent roads
 - temporary roads
 - landings
 - dumps
 - snig tracks
 - forwarding tracks
 - adjoining land
 - wet weather restrictions
 - fire protection requirements
- Cartage** is to include:
- the use of log truck hauling operators to remove felled logs from the site
- Regeneration** is to include:
- the return of a coupe to a revegetated state
 - protecting its landscape
 - soil and drainage
- Site conditions** should include:
- rainfall
 - soil type
 - topography

RANGE STATEMENT

Environmental protection measures may include:

action to limit impacts on:

- selected forest vegetation
- fauna
- habitat
- soil and water features

Seeding process is to include:

- natural seed-fall following burning of log debris

Silviculture is to include:

- the growth management of a forest and tending to the trees to maximise growth

Records and reports may include:

- producing detailed records and reports outlining the planning of coupe establishment, harvesting and regeneration processes
- and may be manual, using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Forest Growing and Management

FPIFGM5217A Promote plantations as a sustainable form of land use

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to develop, implement monitor and review a program to promote to stakeholders and the general community, the environmental and sustainability benefits of plantations compared to other forms of land use

General workplace legislative and regulatory requirements apply to this unit. Compliance with licensing, regulatory or certification requirements including Chain of custody certification may be required in various jurisdictions

Application of the Unit

Application of the unit

The unit involves promoting plantations such as agroforestry for land rehabilitation to stakeholders and to the general community including landholders and local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------------|---|
| 1. Identify target markets | 1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to developing and managing a <i>promotions program</i> are identified and followed
1.2. Potential of program to appeal to <i>stakeholders</i> is identified in terms of benefits and costs
1.3. Potential audiences of programs are evaluated
1.4. Benefits of and needs for promotions program are clarified |
| 2. Plan a promotions program | 2.1. Program purpose and objectives are defined
2.2. Promotions program is developed with appropriate outcomes in consultation with key stakeholders
2.3. <i>Timeline</i> and budget are identified and checked with <i>appropriate personnel</i>
2.4. Range of <i>promotional modes and methods</i> to reach different target sectors are selected and documented in the plan
2.5. Range of tools and <i>resources</i> appropriate to program modes and methods are developed
2.6. Necessary <i>approvals</i> are sought and obtained |
| 3. Implement | 3.1. Promotions program is implemented in line with |

ELEMENT	PERFORMANCE CRITERIA
promotions program	<p>modes, methods, schedule, budget and legislative requirements</p> <p>3.2. Required resources and <i>authorisations</i> are obtained and coordinated in line with organisational requirements</p> <p>3.3. Schedule for program is communicated to coordinating personnel</p> <p>3.4. Tools and resources are provided to coordinating personnel</p> <p>3.5. Processes to monitor the quality of the program are established</p>
4. Monitor and review promotions program	<p>4.1. Program is <i>reviewed</i> to ensure compliance with organisational and legislative requirements</p> <p>4.2. <i>Communication</i> with coordinating personnel is maintained</p> <p>4.3. Program is amended as required, to ensure objectives, quality and performance targets are met</p> <p>4.4. <i>Information</i> and data from completed program are analysed to determine effectiveness of program</p> <p>4.5. Recommendations for future programs are prepared based on findings of analysis and consultation conducted</p> <p>4.6. Program processes are <i>recorded and reported</i> to appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to identify species suitable for plantation establishment for a range of soil types and climates; determine appropriate establishment techniques for a range of conditions; determine appropriate silvicultural regimes for a range of plantation types
- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues, stakeholders and community groups
- Literacy skills sufficient to accurately prepare a range of reports, documentation and submissions where precise meaning is required; present written and oral

REQUIRED SKILLS AND KNOWLEDGE

information to a wide range of individuals and groups; use and adapt complex maps and diagrams

- Numeracy skills sufficient to monitor and maintain timelines and budgets; analyse qualitative and quantitative information and data
- Problem solving skills sufficient to demonstrate time and project management
- Planning and organisational skills to coordinate the acquisition of required resources, authorisations and approvals and to develop a promotions program

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for promoting plantations as a sustainable form of land use
- Environmental protection requirements, including the safe disposal of waste material
- Organisational, site and management standards, requirements, policies and processes for developing and managing a plantation promotions program
- Environmental risks and hazards
- Role of wood or waste products in generating renewable energy through biomass
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Species suitable for plantation establishment for a range of soil types and climates
- Types of plantation design appropriate to achieve a range of objectives
- Plantation establishment techniques
- Silvicultural regimes suitable for a range of plantation types
- Effects of plantation on soils, water quality, water quantity and biodiversity compared to other land uses
- Levels of use of fertilisers, herbicides, insecticides and other chemicals compared to other land uses
- Socioeconomic impacts of plantations on rural communities
- Use and demand for plantation products nationally and internationally
- Market opportunities for plantation products, including carbon storage
- Harvesting methods suitable for a range of plantation types
- Economic benefits of plantations compared to other land uses
- Fire protection and suppression in plantations
- Established communication channels and protocols
- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can develop, implement, monitor and review a plantation promotions program

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to developing, implementing, monitoring and reviewing a plantation promotions program
- following organisational policies and procedures relevant to developing, implementing, monitoring and reviewing a plantation promotions program
- developing a promotions program using consultative processes with colleagues and stakeholders to obtain inputs, and ensuring efficient and safe processes and timelines
- implementing a promotions program in line with documented plan and budget, and making adjustments to plan or program as required
- monitoring, reviewing and analysing promotions program and using findings to document improvements to future programs
- preparing and presenting a detailed report including costs, processes and analysing the findings of the program

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in

EVIDENCE GUIDE

an off-site context

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment methods applicable to this unit may include direct observation of tasks with questioning of required knowledge and the completion of projects, assignments or written tests and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements may include:

- heritage and traditional land owner issues
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- access and equity principles and practices

Promotions program:

must communicate the benefits of tree plantations as an alternative land use, to people including:

- landholders
- local government (councils)
- general public

and may be:

- used to provide advice on a range of matters relating to plantation management including:
 - objectives of plantation establishment
 - species selection
 - plantation designs
 - establishment techniques
 - silvicultural regimes
 - maintenance
 - fire protection
 - market opportunities

Stakeholders may include

- individuals and groups both inside and outside the organisation who have some direct interest in the organisation's conduct, actions, products and services, including:
 - customers

RANGE STATEMENT

- employees at all levels of the organisation
- government
- investors
- key personnel within the organisation, and specialists outside it who may have particular technical expertise
- local community
- other organisations
- regulators
- suppliers

Timelines may be:

- critical to the success of the program

Appropriate personnel may include:

- coordinating or operational personnel
- management
- colleagues
- clients
- relevant groups

Promotional modes and methods:

- relate to promotional activities

and may include:

- literature
- self-help material
- field demonstrations
- field inspections
- lectures
- workshops
- field days
- brochures
- information sessions
- individual consultations
- multimedia material

Resources may include:

- people
- materials
- equipment

Approvals may be:

required by:

- environmental bodies
- local, State/Territory and federal government bodies and agencies

and may include:

- long-term budget approvals

RANGE STATEMENT

- Authorisations** may include:
- permits, approvals and licences relating to use of resource material
- and may relate to:
- use of existing plantations for demonstration purposes
- Reviewing** may include:
- checking compliance with:
 - OHS, organisational, legislative and environmental regulations
 - specified procedures, practices and precautions
 - reporting on specifications, quality, performance targets
 - checking that documentation is completed and submitted as required
- Communication** may include:
- regular communication with the operations and coordinating personnel to ensure smooth progress of the promotions
- Information** may relate to:
- extent and methods of promotions used
 - numbers and categories of people exposed to the promotions
 - numbers of enquiries received about plantation establishment before and after the promotions program
 - numbers and types of new plantations established before and after the promotions program
 - direct feedback from people exposed to the promotions program
- Records and reports** may include:
- difficulties or issues faced during development and implementation of the promotions program
 - recommendations for future work
 - results
 - costs
 - data analysis
- and may be:
- manual
 - using a computer-based system or another appropriate communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Forest Growing and Management

FPIFGM5219 Undertake carbon stock sampling of forests and plantations

Modification History

Version	Code and title of equivalent unit of competency
1.0	FPIFGM5218A Undertake carbon storage sampling of forests and plantations. Equivalent

Unit Descriptor

Unit descriptor This unit describes the outcomes required to assess forests and plantations for current and future carbon stocks, including the use of growth modelling techniques to estimate future stocks.

Application of the Unit

Application of the unit The unit involves assessing forests and plantations for current and future carbon stocks in a variety of work settings, including:

- native forest environment
- hardwood or softwood plantation
- agroforestry and farm forestry.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit. Subject to enterprise requirements specific licences/certification may be required in the following areas:

- Forest sustainability certification
- Chain of custody certification.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for carbon stock sampling activities	<p>1.1. Applicable <i>work/occupational health and safety (WHS/OHS), environmental, legislative and organisational requirements</i> relevant to planning and managing a carbon stock sampling activity are identified and followed</p> <p>1.2. Purpose, objectives and scope of sample collection activity are confirmed from discussions with stakeholders</p> <p>1.3. Desktop study of existing forests and plantations is conducted</p> <p>1.4. <i>Measurement program</i> is designed</p> <p>1.5. Sampling site locations are confirmed and where required, <i>approval</i> is obtained for site access</p> <p>1.6. <i>Characteristics of sites</i> are evaluated for impact on sampling and testing method</p> <p>1.7. Human and physical <i>resource requirements</i> are determined and arranged</p>
2. Prepare for carbon stock sampling activities	<p>2.1. Surveying activity and contractors are arranged</p> <p>2.2. Forests and plantations are located using site maps</p>

ELEMENT	PERFORMANCE CRITERIA
	and plans
	2.3.Areas of forests and plantations for sampling are identified
	2.4.WHS/OHS hazards are identified, risks assessed, and the controls implemented are reported
	2.5.Administrative requirements are completed and approvals obtained
3. Conduct carbon stock sampling collection	3.1.Safe working environment is established and monitored throughout sampling activities
	3.2.Sampling activities are coordinated at sites prior to commencement of and during the work activity
	3.3.Sampling equipment is inspected and tested to ensure functionality, safety and compliance with manufacturer instructions
	3.4.Surveys and sampling are conducted in line with site, enterprise and legislative requirements
	3.5.Hazards and emergency situations are recognised and responded to in line with site and legislative requirements
	3.6.Results of samples and surveys are <i>recorded</i> in line with sampling plan
	3.7. <i>Sampling</i> activities are monitored on a regular basis against sampling plan and required modifications or improvements are implemented
4. Interpret results	4.1.Forest carbon stocks are estimated from data collected
	4.2. <i>Assessment</i> is reviewed against assessment program and organisational requirements
	4.3. <i>Information</i> and data are analysed to determine effectiveness of assessment and improvements to future programs
	4.4.Recommendations for future programs are prepared based on findings of analysis, and consultation is conducted
	4.5.Assessment processes are recorded and reported to appropriate personnel
5. Use growth models to predict biomass and carbon stocks	5.1.Appropriate growth model is selected
	5.2.Information and data from assessments are used in growth models to predict biomass growth and carbon stocks
	5.3.Data is analysed to determine if predicted forest carbon stocks are comparable to available data

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills to select sampling techniques and create sampling designs; identify species growing in the target area; and identify components of the forest/plantation that contain carbon stocks
- Communication skills to use appropriate consultative, communication and interpersonal techniques with colleagues and others; and present written and oral information to a wide range of individuals and groups
- Literacy skills to analyse qualitative and quantitative information and data; prepare site maps and plans; and accurately prepare a range of reports, documentation and submissions where precise meaning is required
- Numeracy skills to use growth models to predict growth; and use and adapt complex maps and diagrams
- Problem-solving skills to demonstrate time and project management

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for undertaking carbon stock sampling of forests and plantations
- Environmental protection requirements, including the safe disposal of waste material and minimising environmental impact
- Organisational, site and management standards, requirements, policies and processes for undertaking carbon stock sampling of forests and plantations
- Environmental risks and hazards associated with undertaking carbon stock sampling of forests and plantations
- Using energy effectively and efficiently
- Using materials effectively and efficiently
- Procedures for the development and implementation of a range of environmental management strategies
- Data collection and analysis methods
- Map and plan preparation techniques
- Characteristics and growth habits of local vegetation
- Soil characteristics and topography of local area
- Use and application of appropriate survey and assessment equipment
- Statistical analysis techniques applicable to biomass and carbon assessments
- Sampling techniques applicable to biomass and carbon assessments
- Use and application of growth models

REQUIRED SKILLS AND KNOWLEDGE

- Established communication channels and protocols
- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimation and measurement
- Procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence and demonstrate that they can plan and oversee an assessment of forests and plantations for carbon stocks, and interpret the results for use in growth models to predict carbon stocks.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to planning, implementing, monitoring and reviewing an assessment of forests and plantations for carbon stocks, and using growth models to predict carbon stock growth
- following organisational policies and procedures relevant to planning, implementing, monitoring and reviewing an assessment of forests and plantations for carbon stocks, and using growth models to predict carbon stock growth
- planning an assessment program using consultative processes with colleagues and stakeholders to obtain inputs, and ensuring efficient and safe processes and timelines
- safely implementing an assessment program in line with documented plan and budget, and making adjustments to program as required

EVIDENCE GUIDE

- monitoring the conduct of the sampling collection
 - interpreting the results of the sampling program and preparing and providing an estimate of carbon stocks
 - using data from assessments to predict biomass growth and carbon stocks
 - checking predicted data against new assessment data to modify growth models to better represent the forests or plantations being assessed.
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be

EVIDENCE GUIDE

transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

WHS/OHS requirements:

- are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - personal protective equipment and clothing
 - safety equipment
 - first aid equipment
 - fire fighting equipment
 - hazard and risk control
 - fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices, including required actions relating to forest fire
 - manual handling, including shifting, lifting and carrying

RANGE STATEMENT

Environmental requirements:

- may relate to:
 - hygiene of the area
 - commonwealth, state or territory and local legislation and regulations
- may include consideration of:
 - ground growth
 - canopy
 - general forest health
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards and obstacles
 - contingencies for modifying operations during wet or other adverse weather conditions

Legislative requirements:

- are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - Australian standards
 - WHS/OHS procedures
 - the environment
 - relevant industry codes of practice
 - duty of care

Organisational requirements may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- WHS/OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling)

RANGE STATEMENT

- and re-use guidelines)
- Measurement program:**
- is used to calculate current and expected biomass and carbon stocks of:
 - trees (above and below ground)
 - other vegetation
 - litter layer
 - soil
 - wood products
 - may include:
 - putting a monitoring process in place to enable reporting against marketing, strategic and business plans
 - incorporating the use of growth models to predict biomass growth and carbon stock growth
- Approvals:**
- may be required by:
 - environmental bodies
 - local, state, territory and commonwealth government bodies and agencies
 - may include
 - long-term budget approvals
 - authorisations, such as:
 - permits
 - licences relating to neighbouring sites or properties, hours of operation, use and application of chemicals, the environment
- Characteristics of sites** may include:
- range of operations
 - conditions
 - hazards
 - difficult/sensitive environments
- Resource requirements** may include:
- people
 - materials and equipment
 - tools, including geographic information systems and aerial photography
- Records:**
- may include:
 - difficulties or issues faced during planning and implementation of the assessment program
 - recommendations for future work

RANGE STATEMENT

- results, costs, data analysis
 - may be:
 - manual
 - using a computer-based system or other appropriate communication system
- Sampling techniques:**
- relate to measurement and survey
 - may include:
 - use of geographic information systems
 - interpretation of aerial photography
- Assessment** may include checking:
- compliance with WHS/OHS, organisational, legislative and environmental regulations, procedures, practices and precautions
 - adherence to site environmental imperatives
 - specifications, quality, performance targets
 - documentation is completed and submitted as required
- Information:**
- relates to the sample area
 - may include:
 - previous surveys and assessments
 - aerial photography
 - geographic information systems data
 - previous reports
 - management information systems data
 - marketing, strategic data
 - business plans and associated implementation plans

Unit Sector(s)

Not applicable.

Competency field

Forest Growing and Management

FPIFGM6201B Plan a biochar storage system for carbon capture and storage

Modification History

Version	Comments
Version 1.1	Released with FPI11 Training Package Version 2. Minor amendment to application. Equivalent to FPIFGM6201A Plan a biochar storage system for carbon capture and storage.
Version 1	First released with FPI11 Training Package Version 1.

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to research requirements to confirm feasibility and design, and plan for a bio-char carbon storage system using forest or forestry related biomass.

Application of the Unit

Application of the unit

The unit involves implementing bio-char storage systems at senior management or project management levels in a variety of work settings including:

- forest environment (native and plantation environment)
- saw mill
- wood chip mill
- veneer mill
- board/plywood mill
- timber treatment plants
- downstream processing of timber
- timber and wood products production

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication.

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Assess bio-char carbon storage system feasibility

- 1.1. Applicable ***Occupational Health and Safety (OHS), environmental, legislative and organisational requirements*** relevant to planning a bio-char system for carbon capture and storage are identified and followed
- 1.2. Research into ***bio-char carbon storage systems*** is undertaken
- 1.3. Organisational need for a bio-char carbon storage system is explored
- 1.4. Context for the bio-char carbon storage system is investigated and clarified through consultation with

ELEMENT	PERFORMANCE CRITERIA
	<i>users</i>
	1.5. <i>User requirements</i> are identified and documented
	1.6. Environmental parameters are identified
	1.7. Bio-char carbon storage system options are investigated and installation, operation and maintenance requirements are identified
	1.8. Recommendations from the feasibility study are formulated
2. Determine facility requirements	2.1. <i>Feed stock</i> for the bio-char process is selected
	2.2. Amount of feed stock that can be obtained for <i>pyrolysis</i> is calculated
	2.3. <i>Method of pyrolysis</i> is selected based on feed stock and appropriate outputs
	2.4. Cost of transportation of liquid and solid by-products is estimated
	2.5. Amount of material to be processed is assessed
	2.6. Ability to feed into the power grid is considered
	2.7. <i>Process conditions</i> are determined
3. Design a bio-char carbon storage facility	3.1. Facility is designed to provide optimal conditions for carbon storage
	3.2. Legal requirements or government regulations impacting on the proposed facility are identified and addressed
	3.3. <i>Design specification</i> is documented and relevant information is communicated through plans, standard operating practice (SOP) manuals, records or reports
	3.4. Overall operation and output of the proposed facility is reviewed to ensure that it meets the long-term directions and purposes of the organisation and is economically sustainable
4. Plan implementation of bio-char carbon storage facility	4.1. <i>Construction plan</i> is developed according to accepted design principles, organisational requirements and commissioning or start-up SOP
	4.2. Work team's knowledge and skills are evaluated against the construction plan and works schedules, and the requirement for external expertise is determined and obtained
	4.3. Material, resource and supply provision requirements are determined and documented from work plans, schedules and design specifications
	4.4. Labour requirements are estimated based on work

ELEMENT**PERFORMANCE CRITERIA**

plans and schedules

4.5. Operating expense budget is determined indicating all input and output costs applicable to the proposed facility

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to implement a bio-char carbon storage system
- Communication skills sufficient to use appropriate communication and interpersonal techniques with stakeholders; utilise technical and theoretical concepts in operational applications
- Literacy skills sufficient to record and report workplace information; maintain documentation and collect data
- Numeracy analytical skills sufficient to analyse relevant workplace information and collect data
- Mathematical skills in relation to estimating volumes (gross and net area volumes), flow rate schedules and product ratios
- Problem solving skills sufficient to identify problems and appropriate response procedures in abstract and applied settings

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning a bio-char storage system for carbon capture and storage
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning a bio-char storage system for carbon capture and storage
- Environmental risks and hazards
- Minimising environmental impact
- Using energy effectively and efficiently
- Using material effectively and efficiently
- OHS standards for managing a bio-char facility
- Industry standards and codes of practice (including mandated and voluntary)

REQUIRED SKILLS AND KNOWLEDGE

- Carbon marketing principles
- Environmental protection monitoring systems associated with a bio-char facility
- Quality management systems designed for chemical production
- Fundamental principles of chemistry applied to the nature and stability of bio-char outputs
- Established communication channels and protocols including notification of authorities
- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can design and plan for a bio-char carbon storage system

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to designing and planning for a bio-char carbon storage system
- following organisational policies and procedures relevant to designing and planning for a bio-char carbon storage system
- determining the feasibility of a bio-char carbon storage facility
- determining bio-char carbon storage facility requirements
- designing a bio-char carbon storage facility
- planning the implementation of a bio-char carbon storage facility

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Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in accordance with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in accordance with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

- Organisational requirements** may include:
- Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - procedural manuals
 - continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Bio-char carbon storage system** will be based upon pyrolysis and may include requirements for:
- feed stock characteristics
 - input volumes
 - output characteristics
- Users** may include:
- harvesting operations
 - forest owners
 - sawmill operators
 - timber processing and manufacturing facilities
 - industries supplying feedstock
 - agriculturists
 - government land managers
 - energy consumers
 - participants in carbon market markets
 - other users of by-products
 - neighbours
 - government departments and councils

RANGE STATEMENT

- User requirements** may include:
- organisational staff and contractors
 - by-products of a pyrolysis system
 - waste management options
 - carbon sequestration priorities
 - land management priorities
 - development priorities
 - investor interests
 - financial returns
 - environmental outputs
 - social responsibility
 - sustainability
 - input usage
- Feed stock** may include:
- wood products, including:
 - harvesting residues
 - green mill residue
 - dry mill residue
 - residue from other wood fibre processing operations
 - agricultural waste
 - crops grown for the consumption of bio-char plants
 - manure and waste from intensive animal farming systems
 - municipal waste
- Pyrolysis** is the thermochemical decomposition of organic material at elevated temperatures in the absence of oxygen
- Method of pyrolysis** may include:
- slow pyrolysis
 - fast pyrolysis
 - intermediate pyrolysis
 - carbonisation
 - gasification
- Process conditions** may include:
- temperature
 - residence time
 - heating rate
 - feed stock preparation
- Design specifications** may include:
- designated component or system number
 - size, volume and footprint area
 - production requirements, including:

RANGE STATEMENT

- tonnage
 - timing
 - production characteristics
 - construction materials of the facility
 - construction method
 - equipment and resources
 - location
 - budget
 - environmental constraints
- Construction plan** may include:
- designated tasks
 - order of activities
 - specific structures or components
 - location
 - date and time tasks are to be undertaken
 - expected time required to completed activities
 - standard for completed activities
 - materials, supplies, tools, equipment or other resources required
 - person in charge
 - other members of work team and their roles, responsibilities and skills
 - preferred supplier list and resources required by external workers or tradespeople
 - non-conformance or incident/fault reporting procedures
 - contingency plan to address staffing and equipment supply problems
 - costs and budget details
 - manufacturers' guidelines or instructions
 - maintenance schedule for particular items of equipment
 - routine maintenance procedures
 - hazard identification, risk assessment and risk control measures
 - OHS procedures
 - environmental impact control measures
 - monitoring and reporting requirements and procedures

Unit Sector(s)

Not Applicable

Competency field

Competency field

Forest Growing and Management/Sawmilling and
Processing and Timber Manufacturing

FPIFGM6203 Manage sustainable tree inventory

Modification History

Version	Code and title of equivalent unit of competency
1.0	Equivalent to FPIFGM6202A Manage tree inventory for sustainable tree management

Unit Descriptor

Unit descriptor This unit describes the outcomes required to develop a tree inventory plan to manage an inventory of forestry timber assets.

Application of the Unit

Application of the unit The unit mainly applies to people who manage forests for enterprises but may also apply to people who have responsibility for sustainable tree management in urban or rural enterprises.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

General workplace legislative and regulatory requirements apply to this unit, however there are no specific licensing or certification requirements at the time of publication.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Conduct risk assessment for managing tree inventory	1.1. Applicable <i>work/occupational health and safety</i> (WHS/OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to managing tree inventory for sustainable tree management are identified and followed 1.2. Nature of <i>resource</i> and <i>site characteristics</i> are identified 1.3. <i>Enterprise requirements</i> and <i>enterprise outputs</i> are identified 1.4. <i>External influences</i> are researched and assessed 1.5. <i>Risk</i> and potential <i>outcomes</i> are identified
2. Use developed risk assessment to support development of a tree inventory plan	2.1. Sustainable tree management requirements are researched and analysed 2.2. Appropriate <i>stakeholders</i> are consulted and support obtained for the development of a tree inventory plan 2.3. Management approval is obtained for identified inventory management approach
3. Prepare tree inventory plan for sustainable forest management	3.1. <i>Administrative tools, physical resources</i> and <i>recording methodology</i> are identified 3.2. Forest estate is identified 3.3. Necessary human resources are identified 3.4. <i>Financial requirements</i> are forecast 3.5. <i>Quality assurance</i> system is established

ELEMENT	PERFORMANCE CRITERIA
4. Manage the implementation of tree inventory plan	<p>3.6. <i>Communication plan</i> is established</p> <p>4.1. Action is taken to ensure participating stakeholders are clear about their responsibilities and the plan requirements</p> <p>4.2. Support is provided to stakeholders to ensure the quality of expected outcomes and objectives are met</p> <p>4.3. Record keeping systems are maintained</p> <p>4.4. Plans for monitoring finances and resources are implemented and monitored</p> <p>4.5. Review of risk management is undertaken as required to ensure outcomes are met</p> <p>4.6. Review of plan outcomes and objectives is undertaken</p>
5. Review tree inventory plan	<p>5.1. Data is collected and analysed</p> <p>5.2. Variations from plan are identified and investigated</p> <p>5.3. Appropriate stakeholders are consulted about desired and actual outcomes</p> <p>5.4. Outcomes and processes are reviewed against tree inventory plan</p> <p>5.5. Lessons learned are documented and reported within the organisation</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Research, technical, planning and organisational skills to manage a sustainable tree inventory
- Technical skills to undertake surveys and map information; and interpret data generated from manual and electronic surveying and mensuration
- Management skills to manage databases, prepare a tree inventory plan, undertake appropriate consultation, and undertake risk assessment
- Communication skills to use appropriate communication and interpersonal techniques with stakeholders
- Literacy skills to record and report workplace information, maintain documentation, and collect data
- Numeracy analytical skills to analyse relevant workplace information and

REQUIRED SKILLS AND KNOWLEDGE

collected data

- Problem-solving skills to identify problems and appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing a sustainable tree inventory
- Environmental protection requirements, including the safe disposal of waste material and minimising environmental impact
- Organisational and site standards, requirements, policies and procedures for managing a sustainable tree inventory
- Environmental risks and hazards associated with managing a sustainable tree inventory
- Role of wood or waste products in generating renewable energy through biomass
- Using energy effectively and efficiently
- Using materials effectively and efficiently
- WHS/OHS in relation to operations
- Database management and document control systems
- Relevant species behavioural characteristics
- Silvicultural practices associated with management objectives
- Key sustainability indicators
- Mensuration theory
- Inventory tools and their application
- Trigonometry associated with surveying and tree measuring
- Established communication channels and protocols, including notification of authorities
- Problem identification and resolution strategies
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently manage a sustainable tree inventory.

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing a sustainable tree inventory
- following organisational policies and procedures relevant to developing and managing a tree inventory plan in line with sustainable tree management principles
- gaining support for the development of a tree inventory plan in line with sustainable tree management principles
- preparing a tree inventory plan in line with sustainable tree management principles
- managing the implementation of a tree inventory plan
- reviewing a tree inventory plan in meeting organisational and sustainable tree management requirements
- communicating the plan to all stakeholders.

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE

- application of required knowledge
- Assessment may be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

WHS/OHS requirements:

- are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling, including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

- are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - Australian standards
 - WHS/OHS procedures
 - the environment
 - relevant industry codes of practice
 - duty of care

Organisational requirements may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- continuous improvement processes and standards
- WHS/OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Resource may include:

- species identification
- size
- age and class

RANGE STATEMENT

- condition
 - forest or land area
- Site characteristics** may include:
- elevation
 - slope
 - orientation
 - neighbouring estates
 - microclimate
 - rainfall
 - soil type
- Enterprise requirements** may include:
- quality policy
 - environmental policy
 - cost-benefit or net present value analyses
 - management objectives
- Enterprise outputs** may include:
- solid timber
 - chip
 - carbon storage
 - nature reserve
 - streetscapes
 - community forestry
 - recreational use
- External influences** may include:
- international forestry and environmental standards
 - Australian forestry and environmental standards
 - state, territory and local legislation and subordinate legislation
 - advisory standards and codes of practice
 - land tenure and access
 - neighbouring tenure and access
 - habitat
 - cultural and heritage sites
 - agriforestry arrangements
 - fire management
 - data availability
 - human resource skills and availability
- Risk** may include:
- biological
 - pests and diseases
 - weather/climate change
 - economic risk
 - erosion

RANGE STATEMENT

- fire
 - market failure
 - natural disaster
 - sabotage
 - water
 - structural failure
- Outcomes** may include:
- established growth rates
 - established volumes
 - forecasted outputs
 - forecasted sustainability
 - monitored sustainability
 - preserved forest sustainability
- Stakeholders** may include:
- shareholders or investors
 - customers
 - contractors
 - operational staff or contractors
 - administrative staff or contractors
 - technical staff or contractors
 - professional staff or contractors
 - government
 - community
- Administrative tools** may include:
- computer hardware and software
 - filing systems
 - field templates
 - operational manual
 - land access information
 - gantt charts
 - flow charts
- Physical resources** may include:
- measuring/diameter tapes
 - dataloggers and laptops
 - log sheets
 - compass
 - clinometer
 - height sticks
 - prisms
 - mobile GPS
 - maps
 - survey and title data
 - survey equipment
- Recording methodology** may
- dataloggers

RANGE STATEMENT

include:

- log sheets
- manual or electronic data transfer
- analytical techniques and formulae
- radio/UV/laser advanced technology
- digital dataloggers and laptop computers
- desk or field surveys
- testing and calibration records

Financial requirements may include:

- budget and forecast financials
- appropriate allocations to field and desk activities
- time-adjusted forecasts
- management overhead

Quality assurance may include:

- data collection and submission protocols
- data verification protocols
- documented analytical protocols
- documented and controlled system
- testing and calibration protocols

Communication plan may include:

- accessibility
- organisational chart
- consultation
- directives
- monitoring procedures
- recording and reporting procedures
- time management
- emergency procedures
- contingency procedures
- confidentiality

Unit Sector(s)

Not applicable.

Competency field

Competency field Forest Growing and Management

FPIHAR2203B Hook up felled logs using cables (choker)

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to fasten choker cables around logs for yarding from the cutting area to the landing. The unit includes assisting with line shifts

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIHAR2203A Hook up felled logs using cable (choker)

Application of the Unit

Application of the unit The unit involves the hook up of felled logs using cables (choker) in a forest or farm forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for <i>choker setter</i> operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to hooking up felled logs using cables (choker) are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>logs</i> to be extracted are identified and assessed for safe working conditions and <i>environmental protection measures</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Choker setter and <i>cable operations</i> activities are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Hook up logs	<p>2.1. Specific logs for next turn is attended prior to return of butt rigging in line with planned operation</p> <p>2.2. <i>Stability</i> of logs to be extracted is monitored and</p>

ELEMENT**PERFORMANCE CRITERIA**

- precautions are taken against movement in line with the logging code of practice
- 2.3. Position of logs to be extracted is assessed with regard to haul line, **hook up point** and likely movement
- 2.4. Positioning of **butt rigging** is directed and controlled using signals and strawlines to facilitate planned hook ups
- 2.5. Slack is pulled out for **chokers and grapple ropes** to allow safe hook up
- 2.6. Chokers or grapples are set close to the end of the logs
- 2.7. Area surrounding logs is vacated prior to extraction signal, clear of possible log release
- 2.8. Hook up process and equipment faults are **reported** to the **rigging slinger**
3. Assist with line shifts
- 3.1. All logs to be hauled with existing line position is cleared before **line shift** is initiated
- 3.2. **Stumps are notched** in line with code requirements for the rigging method to be used
- 3.3. Slack is pulled in on all lines prior to release of existing rigging
- 3.4. **Rigging components** are dismantled from the existing line, checked and set up on the new line
- 3.5. Obstructions which may cause binding or damage during hauling are moved as required
- 3.6. Rigging slinger is assisted with rigging of spars, tail trees and intermediate supports

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; accurately notch stumps; effectively set up and dismantle rigging components

REQUIRED SKILLS AND KNOWLEDGE

- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for hooking up felled logs using cables (choker)
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for hooking up felled logs using cables (choker)
- Characteristics of trees
- Log extraction methods
- Cable operation techniques
- Rigging and choking techniques and signal systems
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently perform choker setter operations to recover

EVIDENCE GUIDE

felled logs within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to hooking up felled logs using cables (choker)
- following organisational policies and procedures relevant to hooking up felled logs using cables (choker)
- the ability to perform choker setter operations to recover felled logs in line with the work order and within prescribed organisational tolerances
- the ability to assist in shifting lines in line with the hook tenders instructions

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to

EVIDENCE GUIDE

access and correctly interpret and apply the required knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment

RANGE STATEMENT

- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use)

RANGE STATEMENT

guidelines)

Choker setters

hook up the logs at the felling site

Work order is to include:

- instructions for the choker setter operations to recover felled logs from the work site

and may include:

- type
- size
- length
- quantity
- grade

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Logs is to include:

- the finished product or trunk of a tree after trimming and cross cutting has occurred

and may be:

- hardwood or softwood
- for production or non-production purposes

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards
- obstacles
- contingencies for modifying operations during wet or other adverse weather conditions

Equipment may include:

- rigging equipment

RANGE STATEMENT

and is to include:

- Cable operations** may include:
- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine
 - activities covering a full range of species, log sizes, falling and retention densities, slope, other environmental conditions
 - use of cable systems including high lead (no skyline), standing skyline and a running skyline with hauling both uphill and downhill
 - logs attached optimising payload without exceeding the lift or haul capacity of the system

- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening
 - questioning to clarify and confirm understanding
 - use of electronic communication devices

Stability is the physical stability of the logs in-situ, that it is safe to hook up and not likely to roll off a rock, move on other logs or slide down the hillside

Hook up points are usually at the end of log whereby the choker setter secures the choker cable around the log and secures the end to a bell (sliding fastener) to form a noose

Butt rigging is the sliding rig or tow which the choker and grapple ropes connect to

Chokers and grapple ropes are the steel wire ropes used to hook up logs ready for cable extraction

- Reporting** may include:
- hook up methods or problems
 - tree type
 - size
 - length
 - diameter
 - inspection
 - quality outcomes
 - hazards

RANGE STATEMENT

- Rigging slinger** role includes:
- incidents or equipment malfunctions
 - deciding what logs to take out first and being responsible for getting the log to the landing without breaking it
 - directing the choker setter personnel in hooking up log
 - transmitting signals to and from the yarder

Line shifts are the moving of rigging lines from one area of operation to a new area

Stump notching is the process for securing rigging components, cables and ropes

- Rigging components** may include:
- strawlines
 - blocks
 - sheaves
 - ropes
 - shackles
 - pins
 - skyline
 - tail rope
 - lines
 - straps
 - mobile tail anchors
 - spars
 - intermediate supports
 - bridling

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR2204B Perform landing duties (chaser)

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to direct placement of logs brought to the landing by cable operations and unhooking the logs from the chokers. The unit includes assisting with line shifts

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR2204B Perform landing duties (chaser)

Application of the Unit

Application of the unit

The unit involves performing landing duties (chaser) in a forest or farm forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite skills

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for chaser operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to performing landing duties (<i>chaser</i>) are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>logs</i> to be extracted are identified and assessed for safe working conditions and <i>environmental protection measures</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Chaser and <i>cable operations</i> activities are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Land and unhook logs	<p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. Logs entering <i>landing</i> area are monitored and the</p>

ELEMENT**PERFORMANCE CRITERIA**

- yarder* assisted to place them using signals in line with the cable logging code of practice
- 2.3. Logs are checked to have at least two thirds of their length on the landing before release
- 2.4. **Stability** of logs is checked and adjusted when **chokers or grapple ropes** are slackened
- 2.5. Chokers or grapples are removed, strawlines coiled and **butt rigging** checked and adjusted in line with directions from the yarder operator
- 2.6. Landing area is maintained within industry standards to enable safe and clear log, equipment and personnel movement
- 2.7. Chaser process and equipment faults are **reported** to the yarder in line with site procedures
3. Assist with line shifts
- 3.1. All logs to be hauled with existing line position are cleared before **line shift** is initiated
- 3.2. **Stumps are notched** in line with code requirements for the rigging method to be used
- 3.3. Slack is pulled in on all lines prior to release of existing rigging
- 3.4. **Rigging components** are dismantled from the existing line, checked and set up on the new line
- 3.5. Obstructions which may cause binding or damage during hauling are moved as required
- 3.6. **Rigging slinger** is assisted with rigging of spars, tail trees and intermediate supports

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; accurately notch stumps; effectively set up and dismantle rigging components
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information

REQUIRED SKILLS AND KNOWLEDGE

- Numeracy skills sufficient to estimate, measure and calculate log lengths and time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for performing landing duties (chaser)
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for performing landing duties (chaser)
- Characteristics of trees
- Log extraction methods
- Cable logging techniques
- Rigging and chasing techniques and signal systems
- Industry standard lengths
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently perform chaser operations to recover felled logs within organisational requirements

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to performing landing duties (chaser)
- following organisational policies and procedures relevant to performing landing duties (chaser)
- the ability to perform chaser operations to recover felled logs in line with the work order and within prescribed organisational tolerances
- the ability to assist in shifting lines in line with the hook tender's instructions

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related

EVIDENCE GUIDE

conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and

RANGE STATEMENT

substances

- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Chasers

direct the landing of logs in conjunction with the

RANGE STATEMENT

yarder and unhook the logs at the landing site

Work order is to include:

- instructions for the chaser operations to recover felled logs from the work site

and may include:

- type
- size
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Logs are to include:

- the finished product or trunk of a tree after trimming and cross cutting has occurred

and may be:

- hardwood or softwood
- for production or non-production purposes

Environmental protection measures may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions

Equipment may include:

- rigging equipment

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine

RANGE STATEMENT

- Cable operations** may include:
- activities covering a full range of species, log sizes, falling and retention densities, slope, other environmental conditions
 - use of cable systems including high lead (no skyline), standing skyline and a running skyline with hauling both uphill and downhill
 - Logs attached optimising payload without exceeding the lift or haul capacity of the system
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening
 - questioning to clarify and confirm understanding
 - use of electronic communication devices
- Landing** is the location where the yarder is positioned to receive the logs
- Yarder** is the crane-like vehicle which winches the logs from the felling site to the landing using a cable system
- Stability** is the physical stability of the log in-situ, that it is safe to hook up and not likely to roll off a rock, move on another log or slide down the hillside
- Chokers and grapple ropes** are the steel wire ropes used to hook up logs ready for cable extraction
- Butt rigging** is the sliding rig or tow to which the choker and grapple ropes are connected
- Reporting** may include:
- landing and unhooking methods or problems
 - tree type
 - size
 - length
 - diameter
 - inspection
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions

RANGE STATEMENT

Line shifts are the moving of rigging lines from one area of operation to a new area

Stump notching is the process for securing rigging components, cables and ropes

Rigging components may include:

- strawlines
- blocks
- sheaves
- ropes
- shackles
- pins
- skyline
- tail rope
- lines
- straps
- mobile tail anchors
- spars
- intermediate supports
- bridling

Rigging slinger role includes:

- deciding what logs to take out first and being responsible for getting the logs to the landing without breaking them
- directing the choker setter personnel in hooking up logs
- transmitting signals to and from the yarder

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR2205B Conduct mobile splitting operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate a mobile hydraulic splitting unit to split timber for use in rural settings or to produce firewood

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIHAR2205A Conduct mobile splitting operations

Application of the Unit

Application of the unit

The unit involves conducting mobile splitting operations in a forest or farm forest setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for splitting	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to conducting mobile splitting operations are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>blocks</i> to be <i>split</i> are identified and assessed for safe working conditions</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Splitting activities are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Split timber	<p>2.1. <i>Hydraulic splitter</i> is positioned and secured in line with site procedures</p> <p>2.2. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Vertical or horizontal splitting operations are selected and tested</p> <p>2.4. Timber blocks pre-cut to fit within the hydraulic splitter are positioned and secured</p> <p>2.5. Timber is split into sizes which suit standard fireplaces in line with site procedures</p> <p>2.6. Split timber is stacked or loaded for <i>transportation</i></p> <p>2.7. Split timber that does not meet size requirements is set aside for recycling or re-use in line with site procedures</p> <p>2.8. Splitting processes and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>
3. Conduct operator maintenance	<p>3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>3.2. Splitter is checked for blunt or damaged condition in line with site procedures</p> <p>3.3. Components are removed, maintained, adjusted and replaced in line with manufacturer's recommendations</p> <p>3.4. Hydraulic splitter set-up is assessed and adjusted to suit splitting conditions</p> <p>3.5. Splitter is kept clear of timber shards and debris and checked to ensure it meets relevant standards prior to use</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate a mobile splitter
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work

REQUIRED SKILLS AND KNOWLEDGE

requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for conducting mobile splitting operations
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for conducting mobile splitting operations
- Characteristics of trees and timber defects
- Hydraulic splitting procedures, operation and safety and condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct mobile splitting operations within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and

EVIDENCE GUIDE

- codes of practice relevant to conduct mobile splitting operations
- following organisational policies and procedures relevant to conduct mobile splitting operations
 - conducting mobile splitting operations in line with the work order and within prescribed organisational tolerances
 - conducting operator maintenance on a hydraulic splitter
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT

may include:

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the splitting and despatch of split timber from the work site

and may include:

- type
- size
- length
- quantity
- grade

RANGE STATEMENT

- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Blocks** are timber which has been cross cut into disks or lengths which fit within the hydraulic splitter
- Split** is the process of using the mobile splitter in a horizontal or vertical splitting position to split timber blocks into two or more pieces with hydraulic pressure
- Equipment** may include:
- mobile hydraulic splitters
 - specific safety attire
 - maintenance tools and equipment
- and is to include:
- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening
 - questioning to clarify and confirm understanding
 - use of electronic communication devices
- Hydraulic splitter** is a mobile splitting machine which is towable behind a vehicle and is powered by hydraulics
- Pre start-up checks** are conducted to ensure:
- equipment has been set-up correctly
 - systems are performing accurately and operating to optimum performance
- Transportation** may include:
- trailers
 - utes
 - trucks

RANGE STATEMENT

- Records and reports** may include:
- timber type
 - size
 - length
 - diameter
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
 - and may be compiled manually or by using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR2206B Operate a mobile chipper/mulcher

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to operate a mobile chipping/mulching unit to clean up after felling operations and chip excess branches and timber refuse

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIHAR2206A Operate a mobile chipper/mulcher

Application of the Unit

Application of the unit The unit involves operating a mobile chipper/mulcher in a forest and forest products setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for mobile chipping/mulching

- 1.1. Applicable *Occupational Health and Safety* (OHS), *environmental*, *legislative* and *organisational requirements* relevant to operating a mobile chipper/mulcher are identified and followed
- 1.2. *Work order* is reviewed and checked with *appropriate personnel*
- 1.3. Type and quantity of *timber refuse* to be *chipped/mulched* are identified and assessed for safe working conditions
- 1.4. Timber refuse assessed as not suitable for chipping/mulching is set aside for recycling or re-use in line with site procedures
- 1.5. *Equipment* is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations
- 1.6. Chipping/mulching activities are planned in line with site procedures, environmental requirements
- 1.7. *Communication* with others is established and maintained in line with OHS requirements

ELEMENT	PERFORMANCE CRITERIA
2. Chip/mulch timber	<p>2.1. Chipping/mulching unit is positioned, secured and set up in line with manufacturer's specifications</p> <p>2.2. Pre start-up checks are carried out on equipment in line with site requirements</p> <p>2.3. Timber refuse is fed into the chipper/mulcher at a rate applicable to the capacity of the machinery in line with applicable safe handling techniques</p> <p>2.4. Timber refuse is chipped to the chip sizes set on the chipping unit and in line with the work order</p> <p>2.5. Chipping/mulching processes and equipment faults are recorded and reported to the appropriate personnel</p>
3. Conduct operator maintenance	<p>3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>3.2. Chipper/mulcher is checked for blunt or damaged condition</p> <p>3.3. Components are removed, maintained, adjusted and replaced in line with manufacturer's recommendations</p> <p>3.4. Chipper/mulcher set-up is assessed and adjusted to suit chipping conditions</p> <p>3.5. Chipper/mulcher is kept clear of foreign matter and checked to ensure it meets relevant standards prior to use</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operating a mobile chipper/mulcher
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work

REQUIRED SKILLS AND KNOWLEDGE

requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a mobile chipper/mulcher
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a mobile chipper/mulcher
- Characteristics of trees and timber defects
- Chipping/mulching procedures
- Mobile chipper/mulcher operation and safety
- Chipper/mulcher condition assessment
- Social/community benefit of uses for chipped/mulched timber
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently operate a mobile chipper/mulcher within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to operating a mobile chipper/mulcher
- following organisational policies and procedures relevant to operating a mobile chipper/mulcher
- operating a mobile chipper/mulcher in line with the work order and within prescribed organisational tolerances
- conducting operator maintenance on a mobile chipping unit

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements** may include:
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the chipping/mulching and despatch of chipped/mulched timber refuse from the work site
- and may include:
- type

RANGE STATEMENT

- size
- length
- quantity
- grade

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Timber refuse may include:

- branches
- tree heads
- bark
- other timber waste

Chipping/mulching

is the process of converting timber refuse into varying chip sizes using mechanised chipping/mulching units

Equipment may include:

- mobile chipping/mulching units
- specific safety attire
- maintenance tools and equipment

and is to include procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Chipping/mulching unit may include:

- a truck mounted chipping/mulching unit or trailer mounted chipping/mulching unit feeding into a truck or other form of transportation

RANGE STATEMENT

and is usually petrol driven, with high powered spinning cutters which shred timber refuse into chips/mulch

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately and operating to optimum performance

Capacity may include:

- the capacity of the machinery to cope with certain size diameters of branch
- the speed by which waste is fed into the chipper/mulcher

Chip sizes

may vary in size, dependent on the customer or work order and the capability of the chipper/mulcher to set chip sizes

Records and reports may include:

- timber type
- size
- outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be compiled manually or by using a computer-based system or another appropriate organisational communication system

Foreign matter may include:

- contamination of chip
- stones
- rocks
- metal
- other foreign matter which may blunt the cutters or affect operation of the chipper/mulcher

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR2207A Trim and cut harvested trees

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to trim and cut harvested (felled) trees with a chainsaw for commercial production. The unit also includes equipment maintenance

General legislative, regulatory and workplace requirements apply to this unit; in some jurisdictions there may be licensing requirements related to the application of this unit

This unit replaces FPIHAR2201B Trim and cross cut harvested trees

Application of the Unit

Application of the unit

The unit involves trimming and cutting harvested (felled) trees with a chainsaw for commercial production, in a variety of work settings including a forest environment, as applicable to the unit

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for trimming and cutting	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), environmental, <i>legislative, organisational requirements</i> and manufacturer's specifications relevant to trimming and cutting harvested <i>trees</i> are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> and enterprise environmental management systems are identified and adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Job requirements</i> are reviewed and checked with appropriate personnel</p> <p>1.4. <i>Trimming</i> and cutting activities are planned in line with site procedures</p> <p>1.5. Cutting procedures to achieve optimum utilisation of tree to be cut are identified</p> <p>1.6. <i>Tools and equipment</i> are selected appropriate to job requirements and checked for operational effectiveness in line with organisational procedures and manufacturer's recommendations</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS and organisational requirements</p>

ELEMENT	PERFORMANCE CRITERIA
2. Visually assess trees	<p>2.1. Environmental requirements are identified and used to plan the cutting of each tree</p> <p>2.2. Tree, location and stability are assessed for conditions likely to affect safety of trimming and cutting activities</p> <p>2.3. Tree is visually assessed for defects, grade and recovery status</p> <p>2.4. Trees are assessed for extraction and transport method suitability</p> <p>2.5. Trees unable to be cut safely are identified and referred to appropriate personnel</p>
3. Plan cutting	<p>3.1. Tree is moved or stabilised for safe cutting in line with site standards and regulations</p> <p>3.2. Cutting pattern is selected to optimise time, maximise volume and quality of recovery in line with assessment and finished tree specifications</p> <p>3.3. Sequence of cuts is planned to maintain control of cut sections and minimise cutting problems</p> <p>3.4. Cutting positions selected are measured and marked in line with job requirements and industry standard lengths</p> <p>3.5. Debris is cleared from the work area to allow safe access and prevent saw damage or injury in line with OHS requirements</p>
4. Conduct trimming and cutting	<p>4.1. Pre start-up checks are carried out on equipment in line with site requirements</p> <p>4.2. Movement and whereabouts of other personnel is monitored and work is modified to be in line with OHS regulations</p> <p>4.3. Tree section on each side of planned cut is secured and potential movement is assessed and planned</p> <p>4.4. Saw is operated to cut tree and cutting technique is adjusted in response to movement and condition of the tree</p> <p>4.5. Cut is completed once initiated, minimising capping and splitting, in line with job requirements</p> <p>4.6. Butts are square cut, accessible branches and knots trimmed, and head of tree removed in line with job requirements</p>

ELEMENT	PERFORMANCE CRITERIA
5. Conduct equipment <i>maintenance</i>	<p>4.7. Logs are prepared for extraction in line with site requirements</p> <p>4.8. Trimming and cutting <i>records</i> are prepared and problems reported to the appropriate personnel</p> <p>5.1. Equipment is inspected on completion of trimming and cutting activities</p> <p>5.2. Damaged saws and cutting attachments are identified and dealt with according to site procedures and manufacturer's recommendations</p> <p>5.3. Chain and other components are removed, cleaned, maintained, adjusted or replaced in line with manufacturer's recommendations</p> <p>5.4. Tools and equipment are maintained in line with OHS requirements and manufacturer's recommendations</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment and safely trim and cut harvested trees with a chainsaw
- Assessment skills sufficient to visually assess tree defects, grade and recovery status
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to review and accurately identify work requirements and to locate, record and report information
- Numeracy skills sufficient to estimate and measure tolerances and minimum diameter; and to calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of

REQUIRED SKILLS AND KNOWLEDGE

processes for trimming and cutting harvested trees

- Environmental protection requirements including the safe disposal of waste
- Organisational and site standards, requirements, policies and procedures for trimming and cutting harvested trees; organisational communication channels and protocols; and the recording and reporting of workplace information
- Characteristics of trees and types of timber defects that may affect cutting
- Cutting patterns, sequences and techniques
- Chainsaw operation, safety and maintenance procedures
- Chainsaw chain condition assessment
- Industry standard lengths and tolerances
- Log grades for timber grading
- Extraction methods
- Types of tools and equipment and procedures for their safe operation and maintenance
- Problem identification and resolution strategies

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely trim and cut harvested trees and conduct operator maintenance within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS and environmental, relevant to trimming and cutting harvested trees
- following organisational policies and procedures relevant to trimming and cutting harvested trees
- compliance with applicable licensing or certification requirements

EVIDENCE GUIDE

Context of and specific resources for assessment

- effective communication and safe working practices
- planning cutting to optimise volume, quality and recovery
- trimming and cutting of harvested trees in line with the job requirements and within prescribed organisational tolerances
- maintenance on a chainsaw
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment

EVIDENCE GUIDE

of other units of competency

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- communication systems
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- awareness of danger zone for kickback
- manual handling including shifting, lifting and carrying

RANGE STATEMENT

- erection of warning signs
- potential falling objects
- procedures for cutting on slopes
- location of other workers

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- Australian Standards
- OHS
- the environment
- equal opportunity
- relevant industry codes of practice
- award and enterprise agreements
- industrial relations
- confidentiality and privacy
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS
- emergency and evacuation procedures
- fire prevention procedures
- communication systems
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)
- access and equity principles and practices
- hardwood trees
- softwood trees

Trees may include:

for production purposes

RANGE STATEMENT

Environmental protection measures may include:

- action to limit the impact of noise, wind speed and direction, fallen trees, ground slope, ground hazards and obstacles, general forest lean
- action to limit the impact to ground growth, canopy, density of trees

and may relate to:

- soil and water protection, contingencies for modifying operations during wet or other adverse weather conditions
- the safe disposal of waste material

Job requirements:

may be determined by a coupe plan, operation plan or cutting schedules and may include:

- environmental and safety
- silviculture
- instructions for the trimming, cutting and despatch of harvested trees from the work site
- type, size, length, quantity and grade of product
- planned standard tolerances for length and angle relative to the log centre line
- minimum diameter, damage, shape and known length requirements

Trimming may relate to:

- maintenance of sharpened equipment
- branches
- burls and other small growths
- delimiting
- chainsaws

Tools and equipment may include:

- Personal Protective Equipment (PPE)
- maintenance tools
- fuel and oil containers
- chainsaw maintenance kit

and may include ancillary equipment such as:

- hammer
- axe
- wedges
- cant hook or breaking bar
- first aid kit
- fire control equipment
- tool belt

RANGE STATEMENT

- Communication** may include:
- loggers tape
 - warning signs
 - chainsaw maintenance kit
 - verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - use of electronic devices
- Environmental requirements** may be assessed in relation to:
- ground growth
 - ground slope
 - ground hazards and obstacles
- Defects** may include:
- shakes
 - insect defects
 - knots and resin pockets
 - pipe
 - branches
 - lumps
 - bumps
 - drysides
- Grade** may include:
- an evaluation of the log for defects, quality and size of log return
- Extraction** refers to:
- methods of removing the log from the worksite with mechanical equipment and cables, considering site conditions and specific log location
- Cutting pattern** refers to:
- the plan of cuts to optimise time and recovery of product from the tree
- Sequence of cuts** refers to:
- the order in which individual cuts are made to address issues of compression and tension and product quality and may include single or multiple cuts
- Pre start-up checks** may include checking:
- equipment has been set up correctly
 - the systems are performing accurately
 - equipment is operating to optimum performance
- Cutting technique** may include:
- bridging cuts
 - swinging cuts
 - side bind cuts

RANGE STATEMENT

- delimiting
- boring
- wedge cut
- use of wedges

Capping and splitting refers to:

- defects caused by cutting activities

Head of tree refers to:

- the waste section of the tree containing the smaller branches and heavy foliage

Records may include:

- quality outcomes; hazards, incident reports, equipment malfunctions and damage
- may be compiled using a computer-based system or other appropriate organisational communication system to record and report

Maintenance must include:

- sharpening

and may include:

- refuelling
- inspection, identification and replacement of bar, chain, drive sprockets
- bar oil checks and top up
- air filter check, clean and replacement
- cleaning of saw body, air intake vents and cooling fans
- fitting spare chain and tension chain

Unit Sector(s)

Not Applicable

Competency field

Competency field

Harvesting and Haulage

FPIHAR3201B Monitor log recovery (rigging slinger)

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to direct choker setters, plan for and navigate the extraction or breakout of logs to the landing and the transmission of signals to the yarder for cable logging operations

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3201A Monitor log recovery (rigging slinger)

Application of the Unit

Application of the unit The unit involves monitoring log recovery (rigging slinger) in a forest and forest products setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for <i>rigging slinger</i> operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to monitoring log recovery (rigging slinger) are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>logs</i> to be extracted is identified and assessed for safe working conditions and <i>environmental protection measures</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Rigging slinger and <i>cable operation</i> activities are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Plan breakout	<p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. Audible or visual <i>signal system</i> to be used is</p>

ELEMENT**PERFORMANCE CRITERIA**

- identified
- 2.3. *Site*, the rigged cable system and *landing* are assessed for slope, haul line, backline, lift capacity and landing chute
- 2.4. *Obstacles* to extraction operations are identified and avoidance plan is developed
- 2.5. Logs to be recovered using current and future haul lines are identified
- 2.6. *Extraction pattern* for the typical number and size of logs to be hauled on each turn is planned using assessment information
- 2.7. *Line shifts* are planned during hauling, future rigging points established and rigging is prepared
3. Direct hook up of logs
- 3.1. Specific logs for next turn are selected prior to return of butt rigging in line with planned operation
- 3.2. *Stability* of logs to be extracted is assessed and precautions are taken against movement in line with the logging code of practice
- 3.3. *Choker setters* are directed to prepare and hook up logs ready for extraction
- 3.4. Haul signals are given when all persons are clear from logs and bight of ropes using signalling systems in line with the cable logging code of practice
- 3.5. Log movement is monitored and stopped for corrective action when difficulties occur
- 3.6. Control of movement is maintained using signalling systems until payload is in clear sight of the *yarder* operator
- 3.7. Breakout processes and equipment faults are *recorded and reported* in line with site procedures
4. Assist with line shifts
- 4.1. All logs to be hauled with existing line position are cleared before line shift is initiated
- 4.2. *Stumps are notched* in line with code requirements for the rigging method to be used
- 4.3. Slack is pulled in on all lines prior to release of existing rigging
- 4.4. *Rigging components* are dismantled from the existing line, checked and set up on the new line
- 4.5. Obstructions which may cause binding or damage during hauling are moved as required
- 4.6. Spars, tail trees and intermediate supports are rigged in line with site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; accurately notch stumps; effectively set up and dismantle rigging components
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate measure and calculate including time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for monitoring log recovery (rigging slinger)
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for monitoring log recovery (rigging slinger)
- Characteristics of trees
- Log extraction methods
- Cable logging techniques
- Rigging techniques and signal systems
- Industry standard lengths
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently monitor log recovery (rigging slinger) operations to recover felled logs within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to monitor log recovery (rigging slinger)
- following organisational policies and procedures relevant to monitoring log recovery (rigging slinger)
- performing rigging slinger operations to recover felled logs in line with the work order and within prescribed organisational tolerances
- planning the breakout process in line with site conditions
- assisting in shifting lines in line with the hook tender's instructions

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE

Method of assessment

- materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
 - Where the participant has a disability, reasonable adjustment may be applied during assessment
 - Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised**

RANGE STATEMENT

wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- Rigging slinger** role includes:
- deciding what timber to take out first and being responsible for getting the timber to the landing without breaking it
 - directing the choker setter personnel in hooking up timber
 - transmitting signals to and from the yarder

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination

RANGE STATEMENT

Organisational requirements
may include:

- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the rigging slinger operations to recover felled logs from the work site

and may include:

- type
- size
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Logs are to include:

- the finished product or trunk of a tree after trimming and cross cutting has occurred

and may be:

- hardwood or softwood

RANGE STATEMENT

Environmental protection measures may include:

- for production or non-production purposes
- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions

Equipment may include:

- rigging equipment

Cable operations may include:

- activities covering a full range of species, log sizes, falling and retention densities, slope, other environmental conditions
- use of cable systems including high lead (no skyline), standing skyline and a running skyline with hauling both uphill and downhill
- logs attached optimising payload without exceeding the lift or haul capacity of the system

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Signal system may include:

- whistle signals
- visual signals
- two-way radio
- talk-e-tooter signals
- other audible signals

Site

is the location where tree felling activities have occurred

Landing

is the location where the yarder is positioned to receive the logs

Obstacles may include:

- standing trees

RANGE STATEMENT

- stumps
- rocks
- ground projections

Extraction pattern

is the method of removing the log from the work site with mechanical equipment and cables, considering site conditions and specific log location, in a way that minimises downtime and risk of snags, breakage and hang ups

Line shifts

is the moving of rigging lines from one area of operation to a new area

Stability

is the physical stability of the log in-situ, that it is safe to hook up and not likely to roll off a rock, move on another log or slide down the hillside

Choker setters

hook up the logs at the felling site

Yarder

is the crane-like vehicle which winches the logs from the felling site to the landing using a cable system

Records and reports may include:

- extraction methods
- tree type
- size
- length
- diameter
- inspection
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Stump notching

is the process for securing rigging components, cables and ropes

Rigging components may include:

- strawlines
- blocks
- sheaves

RANGE STATEMENT

- ropes
- shackles
- pins
- skyline
- tail rope
- lines
- straps
- mobile tail anchors
- spars
- intermediate supports
- bridling

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR3206C Conduct forwarder operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to segregate, stack, transport, load and unload logs with a forwarder. Other functions may include loading and unloading of other materials

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3206B Conduct forwarder operations

Application of the Unit

Application of the unit

The unit involves conducting forwarder operations in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for <i>forwarder</i> operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to conducting forwarder operations are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Type and quantity of material to be moved with a forwarder is assessed and prepared</p> <p>1.5. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. Forwarder operations are assessed for <i>safe working conditions</i> and planned in line with site procedures and <i>environmental and heritage concerns</i></p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Operate forwarder	<p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. <i>Pre start-up checks</i> are carried out on equipment in line with manufacturer's recommendations and site</p>

ELEMENT**PERFORMANCE CRITERIA**

- requirements
- 2.3.Forwarder controls and *functions*, including implements or other attachments, brakes and manoeuvrability are checked for serviceability and any faults are rectified or reported
 - 2.4.Forwarder is manoeuvred to maximise efficiency and ensure safety of other equipment and personnel
 - 2.5.Forwarder performance is monitored utilising appropriate indicators to aid efficient operations
 - 2.6.Site *hazards* associated with forwarder operations are detected and safe operating techniques are used to minimise risk
 - 2.7.Operating techniques for the forwarder are within recommended *capacities* and limitations in line with manufacturer's design specifications
 - 2.8.Forwarder is operated to work instructions in line with site operating procedures and *site conditions*
 - 2.9.*Emergency plan procedures are followed in line with OHS, environmental, legal and site requirements*
3. Segregate and stack logs
 - 3.1.Planned landing layout and *log* handling procedures are identified from site and work order instructions and checked with appropriate personnel
 - 3.2.Stacks are located to ensure appropriate space for access by site equipment and the safe conduct of other landing operations
 - 3.3.Log stacks are positioned and *maintained* in line with planned layout and site requirements
 - 3.4.Log stacks are constructed to provide stability and minimise problems from slippage and falling of logs
 - 3.5.Logs delivered to landing are *visually assessed* and directed/moved to appropriate location for further processing or stacking
 4. Load, transport and unload logs
 - 4.1.Forwarder is positioned for safe access to logs within equipment load reach and movement limits in line with manufacturer's recommendations
 - 4.2.Log weight is *estimated* and individual logs are selected and segregated by size and grade
 - 4.3.Logs unable to be determined for size or grade by own personal skill are marked and reported to appropriate personnel
 - 4.4.Logs are systematically *lifted* and placed in line with

ELEMENT	PERFORMANCE CRITERIA
5. Carry out machine operator maintenance	<p>recommended equipment operating procedures to achieve optimum log shape</p> <p>4.5. Placement of logs meets positioning and stability requirements and loads are safely and efficiently transported over planned route</p> <p>5.1. Forwarder is safely parked, shut-down and prepared for maintenance in line with manufacturer's manual and organisational requirements</p> <p>5.2. Visual inspection and fault finding processes are conducted in line with manufacturer's recommendations and organisational requirements</p> <p>5.3. Defective parts are removed and replaced safely and effectively in line with manufacturer's manual and organisational requirements</p> <p>5.4. Routine operational servicing is conducted in line with manufacturer's and organisational requirements</p> <p>5.5. Work area is cleared and waste materials are disposed of or recycled in line with site environmental management plan</p> <p>5.6. Plant, tools and equipment are cleaned, checked, maintained and stored in line with manufacturer's recommendations and standard work practices</p> <p>5.7. Forwarder operational records and reports are completed accurately and processed in line with site procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and efficiently and safely use forwarder to segregate, stack, transport, load and unload logs
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to locate, interpret and apply relevant information in written, diagrammatic and/or oral form including plans, reports, maps,

REQUIRED SKILLS AND KNOWLEDGE

specifications; accurately record and report workplace information, and maintain documentation

- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures, interpret ground conditions and identify hazards

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting forwarder operations including emergency and isolation procedures
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for conducting forwarder operations
- Forwarder operations and operating techniques including lifting procedures
- Technical capability and limitations of forwarder and attachments
- Established communication channels and protocols
- Problem identification and resolution strategies
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct forwarder operations in line with organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting forwarder operations
- following organisational policies and procedures relevant to conducting forwarder operations
- communicating effectively and working safely with others in the work area
- planning, preparing and conducting forwarder operations including segregating and stacking logs, and loading, transporting and unloading logs in line with site requirements
- carrying out authorised operator maintenance

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge

EVIDENCE GUIDE

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Forwarders

may be wheeled or half track and attachments
may include blades

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment

RANGE STATEMENT

- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use)

RANGE STATEMENT

guidelines)

Environmental protection measures

may include action to limit the impact to:

- ground growth and canopy
- soil and water

may include action to limit the impact of:

- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- ground hazards
- obstacles

Work order is to include:

- instructions for the operation of a forwarder and its respective tasks including logs to be handled

and may include:

- information about log placement and access requirements, loading regulations and site operating plans
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- supervisors
- suppliers
- clients
- colleagues
- managers

Appropriate personnel may include:**Safe working conditions**

is to ensure:

- minimal equipment and log movement during forwarder operations
- control of risks and hazards
- dust
- noise
- water
- flora and fauna
- heritage legislation
- culturally sensitive sites and artefacts
- plantations

Environmental and heritage concerns may include:

RANGE STATEMENT

Communication may include:

- native forest
- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Pre start-up checks

are specified by the manufacturer prior to operating the equipment and may include:

- visual and audio warning devices and lights
- engine and stop engine lights
- fluid levels
- cab display instrumentation and gauges and on-board computer systems

and relate to start-up, park and shutdown procedures which may involve:

- safety mechanisms
- operational (horn, operating lights)
- correct location of equipment
- vehicle security

Functions must include:

- segregating, stacking, loading, transporting and unloading of logs

and may include:

- loading and unloading of other materials
- uneven/unstable terrain
- trees
- fires
- overhead and underground services
- bridges
- buildings
- excavations
- traffic
- embankment
- cuttings
- structures and hazardous materials

Capacities of equipment may include:

- efficient and safe operating speed
- duration of operation
- type of activities performed

RANGE STATEMENT

	<ul style="list-style-type: none"> • weight and/or load limitations • operating limitations
Site conditions may include:	<ul style="list-style-type: none"> • wet, dry • day, night • stability of ground • broken ground • slope of working surface • location of water table
Emergency plan may include:	<ul style="list-style-type: none"> • notification of authorities • evacuation procedures • isolation procedures • equipment shutdown procedures • clean up • first aid • use of personal protective equipment and clothing • guarding • access and exit
Logs may include:	<ul style="list-style-type: none"> • full range of species, size • conditions to be encountered in local harvesting operations • softwood or hardwood
Maintenance of log stacks includes providing for:	<ul style="list-style-type: none"> • anticipated stock levels • stock rotation requirements • size • segregation of lengths, species and grades
Visual assessment of logs includes identifying and determining:	<ul style="list-style-type: none"> • species • diameter • length • grade • landing layout • stock rotation requirements
Estimation	of log weight is used to determine lifting requirements and compliance to load plate
Lifting	may be conducted on a trial basis when an issue with load size or stability or other unacceptable operational situation is determined
Placement	of slipper or chocks is made as required to support or compress logs

RANGE STATEMENT

Visual inspection and fault finding may include:

- vehicle number
- danger tags
- personnel proximity
- tyres and rim condition
- wheel nuts and studs
- light positioning and cleanliness
- radiator top up tank
- oil leaks, fuel leaks, water leaks
- no combustible material around exhaust
- damage to equipment
- portable fire extinguisher
- fire suppression system
- cab mounts
- windows
- engine oil to be checked before starting engine
- grease lines
- cab condition

Routine operational servicing may include:

- checking fluid levels
- greasing
- tightening loose fittings
- filter changing

Cleaning methods may include:

- water
- steam
- degreasing
- vacuum
- forced air

Records and reports may include:

- end of shift documentation
- work log
- supplies
- log
- computer readings

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Harvesting and Haulage

FPIHAR3207C Conduct feller buncher operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate a wheeled or tracked feller buncher in a forest environment. It requires the mandatory functions of mechanically falling trees and pre-bunching logs and stems. It may also require functions of segregating and stacking logs, snigging and skidding logs, loading and unloading logs and shovel logging

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3207B Conduct feller buncher operations

Application of the Unit

Application of the unit

The unit involves conducting feller buncher operations in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operations	<p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to conducting <i>feller buncher</i> operations are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Tree or <i>log</i> extraction, placement and access requirements are identified and assessed for <i>safe working conditions</i></p> <p>1.6. Level and/or suitable surface for stability of equipment to be used is determined and confirmed</p> <p>1.7. <i>Feller buncher operations</i> are <i>planned</i> in line with site procedures and <i>environmental and heritage concerns</i></p> <p>1.8. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Operate equipment	<p>2.1. All work is conducted in line with work order,</p>

ELEMENT**PERFORMANCE CRITERIA**

- environmental and OHS requirements
- 2.2. Feller buncher is operated within equipment *capabilities* and limitations and manoeuvred to ensure safe and efficient operations
- 2.3. *Pre-operational checks* are carried out on equipment and *attachments* in line with manufacturer's recommendations and site procedures
- 2.4. Site *hazards* associated with feller buncher operations are detected and safe operating techniques are used to minimise risk
- 2.5. Operating techniques are selected and adjusted as required to meet work requirements and *site conditions*
- 2.6. Feller buncher performance is systematically monitored to ensure and maintain efficient operations
- 2.7. *Emergency plan* procedures are followed in line with OHS, environmental, legal and site requirements
3. Fall individual trees mechanically
- 3.1. Movement and whereabouts of other personnel is monitored and work modified to be in line with OHS requirements
- 3.2. Falling sequence for individual trees is progressively planned to minimise tree damage and maximise falling and extraction efficiency
- 3.3. *Cutting sequence* is planned and communicated to control direction of the fall and minimise damage to the tree and surrounding environment
- 3.4. Equipment is positioned for stable and safe access to tree and operated to clamp and cut tree in line with industry and site standards
- 3.5. Clamping and cutting techniques are adjusted as required in response to movement and condition of tree
- 3.6. Trees too dangerous to be felled safely are marked and referred to appropriate personnel
- 3.7. Unexpected characteristics of a tree are diagnosed and planning is reviewed
- 3.8. Controlled manipulation with equipment is used to free tree hang ups to ensure personnel safety and minimise damage to tree and surrounding environment
- 3.9. Equipment is operated to stack pre-bunched logs and stems to facilitate subsequent extraction operations
- 3.10. Personnel safety and minimal damage to the

ELEMENT**PERFORMANCE CRITERIA**

- timber and surrounding environment are ensured through method used to move timber and stems to pre-bunching site
- 3.11. Equipment is moved over pre-arranged routes with minimal damage to the environment
4. Carry out machine operator maintenance
- 4.1. Equipment lock-out procedures are followed in line with OHS requirements and site procedures
- 4.2. **Visual inspection and fault finding** procedures are conducted in line with manufacturer's recommendations and site procedures
- 4.3. **Routine operational servicing** is conducted to maintain optimum operational performance of equipment
- 4.4. Equipment, attachments and other ancillary equipment are **cleaned** and stored in line with manufacturer's recommendations and site procedures
- 4.5. Faults, malfunctions or problems with equipment are diagnosed and reported in line with site procedures
- 4.6. Feller buncher operation results are **recorded and reported** in line with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and efficiently and safely operate a feller buncher
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation and interpret, apply and convey information in written, diagrammatic and/or verbal form
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting feller buncher operations
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for conducting feller buncher operations
- Equipment processes, technical capability and limitations
- Operational procedures and checks including start-up and shut-down procedures
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct feller buncher operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting feller buncher operations

EVIDENCE GUIDE

- following organisational policies and procedures relevant to conducting feller buncher operations
 - following applicable licensing or certification requirements
 - communicating effectively and working safely with others in the work area
 - planning, preparing and carrying out feller buncher operations to safely and efficiently fall trees mechanically and pre-bunch logs and stems
 - conducting pre-operational checks and routine operational servicing of equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Feller buncher may be:

- wheeled
- tracked

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions

RANGE STATEMENT

	relating to forest fire location of other people, and potential falling objects
Environmental requirements may include:	<ul style="list-style-type: none"> • manual handling including shifting, lifting and carrying • legislation • organisational policies and procedures • workplace practices
Legislative requirements:	are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include: <ul style="list-style-type: none"> • award and enterprise agreements • industrial relations • Australian Standards • confidentiality and privacy • OHS • the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care • heritage and traditional land owner issues
Organisational requirements may include:	<ul style="list-style-type: none"> • legal • organisational and site guidelines • policies and procedures relating to own role and responsibility • quality assurance • procedural manuals • quality and continuous improvement processes and standards • OHS, emergency and evacuation procedures • ethical standards • recording and reporting requirements • equipment use and maintenance and storage requirements • environmental management requirements (waste disposal, recycling and re-use guidelines)
Environmental protection measures	may include action to limit the impact to: <ul style="list-style-type: none"> • ground growth and canopy

RANGE STATEMENT

- soil and water

may include action to limit the impact of:

- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- ground hazards
- obstacles

Work order is to include:

- instructions for feller buncher operations including trees to be felled and retained, and logs to be bunched

and may include:

- information about tree markings, site plans, forest operational plans
- emergency procedures in case of fire and/or accident
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Logs may include:

- range of species
- size
- conditions to be encountered in local harvesting operations
- softwood or hardwood

Safe working conditions

may include identification of:

- risks and hazards
- unsafe ground
- fences
- holes, pot holes
- materials
- vehicles
- abandoned equipment

RANGE STATEMENT

- personnel
- adverse weather conditions (electrical storms, floods)
- fires

Feller buncher operations

must include:

- the mechanical felling of trees and pre-bunching of logs and stems

and may include:

- segregating and stacking logs
- snigging and skidding logs
- loading and unloading logs
- shovel logging

Planning

requires ensuring minimal equipment and log movement during operations including verifying level and stable surfaces for safely relocating logs on equipment

Environmental and heritage concerns may include:

- dust
- noise
- water
- flora and fauna
- heritage legislation
- culturally sensitive sites and artefacts
- plantations
- native forest

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Capabilities of equipment and/or attachments may include:

- efficient and safe operating speed
- duration of operation
- type of activities performed
- weight and/or load limitations
- operating limitations

Pre-operational checks

are conducted to ensure equipment and attachments have been set-up correctly, the systems are performing accurately and operating

RANGE STATEMENT

to optimum performance

and may relate to:

- visual and audio warning devices and lights
- engine and stop engine lights
- fluid levels
- cab display instrumentation and gauges
- on-board computer systems
- start-up, park and shutdown procedures including safety mechanisms operation (horn, operating lights)
- correct location of equipment
- vehicle security

Attachments may include:

- hydraulic chainsaws
- hydraulic sheer knives

Hazards may include:

- uneven/unstable terrain
- trees
- fires
- overhead and underground services
- bridges
- buildings
- excavations
- traffic
- embankment
- cuttings
- structures and hazardous materials

Site conditions may include:

- wet/dry
- day/night
- stability of ground
- broken ground
- slope of working surface
- location of water table

Emergency plan may include:

- notification of authorities
- evacuation procedures
- isolation procedures
- equipment shutdown procedures
- clean up
- first aid
- use of personal protective equipment and clothing
- guarding

RANGE STATEMENT

- Cutting sequence** is to include:
- access and exit
 - the best direction or angle for making cuts to facilitate achieving the fall direction
- Visual inspection and fault finding procedures** may include:
- vehicle number
 - danger tags
 - personnel proximity
 - tyres and rim condition
 - wheel nuts and studs
 - light positioning and cleanliness
 - radiator top up tank
 - oil leaks, fuel leaks
 - water leaks
 - no combustible material around exhaust
 - damage to equipment
 - portable fire extinguisher
 - fire suppression system
 - cab mounts
 - windows
 - engine oil to be checked before starting engine
 - grease lines
 - cab conditions
- Routine operational servicing** may include:
- checking fluid levels
 - greasing
 - tightening loose fittings
 - filter changing
- Cleaning methods** may include:
- water
 - steam
 - degreasing
 - vacuum
 - forced air
- Records and reports may include:**
- end of shift documentation
 - work log
 - supplies
 - log and computer readings
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Harvesting and Haulage

FPIHAR3208C Conduct boom delimeter operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate a boom delimeter in a forest environment. It requires the mandatory functions of mechanically delimiting trees and cutting to length. It may also require functions of segregating and stacking logs

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3208B Conduct boom delimeter operations

Application of the Unit

Application of the unit

The unit involves conducting boom delimeter operations in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Plan and prepare for boom delimber <i>operations</i> | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to conducting boom delimber operations are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Tree or <i>log</i> extraction, placement and access requirements are identified and assessed for <i>safe working conditions</i></p> <p>1.6. Boom delimber operations are <i>planned</i> in line with site procedures and <i>environmental and heritage concerns</i></p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Operate equipment | <p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. Boom delimber is operated and manoeuvred within</p> |

ELEMENT**PERFORMANCE CRITERIA**

- equipment *capabilities* and limitations to ensure safe and efficient operations
- 2.3. *Pre-operational checks* are carried out on equipment and *attachments* in line with manufacturer's recommendations and site procedures
- 2.4. Operating techniques are selected and adjusted as required to meet work requirements and *site conditions*
- 2.5. Boom delimber performance is systematically monitored to ensure and maintain efficient operations
- 2.6. Site *hazards* associated with boom delimber operations are detected and safe operating techniques are used to minimise risk
- 2.7. *Emergency plan* procedures are followed with in line with OHS, environmental, legal and site requirements
3. Delimb individual trees
- 3.1. Movement and whereabouts of other personnel is monitored and work is modified in line with OHS requirements
- 3.2. Access and delimiting characteristics of fallen trees are assessed and processing is planned to ensure minimal damage and maximum recovery
- 3.3. Equipment is *positioned* for stable and safe access to felled trees and loads are placed within rated load/reach capacity
- 3.4. Tree supply is coordinated with other site operations in line with site procedures
- 3.5. Equipment is safely and efficiently operated to clamp, lift and process trees through delimber with minimal damage to surrounding trees
- 3.6. Logs are placed to allow access for extraction within limitations of available clearance and separation for grade and size when possible
- 3.7. Processing techniques are adjusted as required in response to unexpected characteristics, movement or condition of trees
- 3.8. Equipment is moved over pre-arranged routes with minimal damage to the environment
4. Carry out machine operator maintenance
- 4.1. Equipment lock-out procedures are followed in line with OHS requirements and site procedures
- 4.2. *Visual inspection and fault finding* procedures are conducted in line with manufacturer's

ELEMENT**PERFORMANCE CRITERIA**

- recommendations and site procedures
- 4.3. **Routine operational servicing** is conducted to maintain optimum operational performance of equipment in line with manufacturer's recommendations
- 4.4. Equipment, attachments and other ancillary equipment are **cleaned** and stored in line with manufacturer's recommendations and site procedures
- 4.5. Faults, malfunctions or problems with equipment are diagnosed and reported in line with site procedures
- 4.6. Boom delimber operation results are **recorded and reported** in line with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate boom delimber and attachments to delimit trees and cut to length
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation and interpret, apply and convey information in written, diagrammatic and/or verbal form
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for boom delimber operations
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for boom delimber operations

REQUIRED SKILLS AND KNOWLEDGE

- Equipment processes, technical capability and limitations
- Operational procedures and checks including start-up and shut-down procedures
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct boom delimeter operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting boom delimeter operations
- following organisational policies and procedures relevant to conducting boom delimeter operations
- communicating effectively and working safely with others in the work area
- planning, preparing and carrying out boom delimeter operations to safely and efficiently delimb trees mechanically
- conducting pre-operational checks and routine operational servicing of equipment

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Operations must include:

- the mechanical delimiting of trees and cutting to length

and may include:

- the segregating and stacking of timber

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Organisational requirements may include:

Environmental protection measures may include:

action to limit the impact to:

- ground growth and canopy

may include action to limit the impact of:

- soil and water
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- ground hazards

RANGE STATEMENT

Work order is to include:

- obstacles
- instructions for boom delimeter operations including trees/logs to be handled and cutting length requirements

and may include:

- information about site plans, forest operational plans and emergency procedures in case of fire and/or accident
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- managers

Logs may include:

- full range of species
- size and conditions to be encountered in local harvesting operations
- softwood or hardwood

Safe working conditions

may relate to:

- identification of risks and hazards
- unsafe ground
- fences
- holes, pot holes
- materials
- vehicles
- abandoned equipment
- personnel
- adverse weather conditions (electrical storms, floods)
- fires

Planning

requires ensuring minimal equipment and log movement during operations including determining level and stable surfaces for safely relocating loads

Environmental and heritage concerns may include:

- dust
- noise
- water

RANGE STATEMENT

- flora and fauna
 - heritage legislation
 - culturally sensitive sites and artefacts
 - plantations
 - native forest
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening
 - questioning to clarify and confirm understanding
 - use of electronic communication devices
- Capabilities** of equipment and/or attachments may include:
- efficient and safe operating speed
 - duration of operation
 - type of activities performed
 - weight and/or load limitations
 - operating limitations
- Pre-operational checks** are conducted to ensure equipment and attachments have been set-up correctly, the systems are performing accurately and operating to optimum performance
- and may relate to:
- visual and audio warning devices and lights
 - engine and stop engine lights
 - fluid levels
 - cab display instrumentation and gauges
 - on-board computer systems
- and may also involve:
- start-up, park and shut-down procedures including safety mechanisms operation (horn, operating lights), correct location of equipment, vehicle security
- Attachments** may include:
- electronic measuring equipment
 - cut-off saws
- Site conditions** may include:
- wet, dry
 - day, night
 - stability of ground
 - broken ground
 - slope of working surface

RANGE STATEMENT

Hazards may include:

- location of water table
- uneven/unstable terrain
- trees
- fires
- overhead and underground services
- bridges
- buildings
- excavations
- traffic
- embankment
- cuttings
- structures and hazardous materials

Emergency plan may include:

- notification of authorities
- evacuation procedures
- isolation procedures
- equipment shut-down procedures
- clean up
- first aid
- use of personal protective equipment and clothing
- guarding
- access and exit

Positioning of equipment is to ensure:

- machine stability to minimise movement during and between delimiting operations
- safe access to felled trees
- safe processing and placement clearance
- vehicle number

Visual inspection and fault finding procedures may include:

- danger tags
- personnel proximity
- tyres and rim condition
- wheel nuts and studs
- light positioning and cleanliness
- radiator top up tank
- oil leaks, fuel leaks, water leaks
- no combustible material around exhaust
- damage to equipment
- portable fire extinguisher
- fire suppression system
- cab mounts
- windows

RANGE STATEMENT

- engine oil to be checked before starting engine,
 - grease lines
 - cab conditions
 - checking fluid levels
 - greasing
 - tightening loose fittings
 - filter changing
 - water
 - steam
 - degreasing
 - vacuum
 - forced air
 - end of shift documentation
 - work log
- and may be:
- compiled manually
 - using a computer-based system or other appropriate organisational communication

Routine operational servicing may include:

Cleaning methods may include:

Records and reports may include:

Unit Sector(s)

Not Applicable

Competency field

Competency field Harvesting and Haulage

FPIHAR3210C Conduct mechanical processor operations

Modification History

Performance criteria numbering added

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate a wheeled or tracked mechanical processor in a forest environment. It requires the mandatory functions of processing trees mechanically, and segregating and stacking logs

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3210B Conduct mechanical processor operations

Application of the Unit

Application of the unit

The unit involves conducting mechanical processor operations in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to conducting <i>mechanical processor</i> operations are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work plan</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Tree or <i>log</i> load placement and access requirements are identified and assessed for <i>safe working conditions</i></p> <p>1.6. <i>Mechanical processor operations</i> are <i>planned</i> in line with site procedures and <i>environmental and heritage concerns</i></p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Operate equipment	<p>2.1. All work is conducted in line with work plan, environmental and OHS requirements</p> <p>2.2. Mechanical processor is operated within equipment <i>capabilities</i> and limitations, and manoeuvred to ensure safe and efficient operations</p> <p>2.3. <i>Pre-operational checks</i> are carried out on equipment</p>

ELEMENT	PERFORMANCE CRITERIA
	and attachments in line with manufacturer's recommendations and site procedures
	2.4. Operating techniques are selected and adjusted as required to meet work requirements and <i>site conditions</i>
	2.5. Mechanical processor performance is systematically monitored to ensure and maintain efficient operations
	2.6. Site <i>hazards</i> associated with crawler operations are detected and safe operating techniques are used to minimise risk
	2.7. <i>Emergency plan</i> procedures are followed in line with OHS, environmental, legal and site requirements
3. Process individual trees	3.1. Movement and whereabouts of other personnel is monitored and work modified to be in line with OHS requirements
	3.2. Access and processing characteristics of fallen trees are assessed and processing is planned to ensure minimal tree damage and maximum recovery
	3.3. Required length cutting patterns are programmed or modified on processing controller to meet work plan requirements
	3.4. Equipment is <i>positioned</i> for stable and safe access to felled tree and loads are placed within rated load/reach capacity
	3.5. Tree is processed to produce standard length and diameter of logs with optimal grade and length combination in line with work plan requirements
	3.6. Equipment is safely and efficiently operated to stack pre-bunched logs/stems to facilitate subsequent recovery operations
	3.7. Processing techniques are adjusted as required in response to unexpected characteristics, movement or condition of tree
	3.8. Personnel safety and minimal damage to the timber and surrounding environment are ensured through method used to move timber/stems to pre-bunching site
	3.9. Equipment is moved over pre-arranged routes with minimal damage to the environment
4. Segregate and stack logs	4.1. Planned landing layout and log handling procedures are identified from site and work plan instructions and checked with appropriate personnel as required
	4.2. Stacks are located to provide appropriate space for access by site equipment and to allow for the conduct of other landing operations

ELEMENT	PERFORMANCE CRITERIA
	4.3. Log stacks are positioned and <i>maintained</i> in line with planned layout and site requirements
	4.4. Log stacks are constructed to provide stability and minimise problems from slippage and falling of logs
	4.5. Delivered logs are <i>visually assessed</i> and directed/moved to appropriate location for further processing or stacking
5. Carry out machine operator maintenance	5.1. Equipment lock-out procedures are followed in line with OHS requirements and site procedures
	5.2. <i>Visual inspection and fault finding procedures</i> are conducted in line with manufacturer's recommendations and site procedures
	5.3. <i>Routine operational servicing</i> is conducted to maintain optimum operational performance of equipment in line with manufacturer's recommendations
	5.4. Equipment, attachments and other ancillary equipment is <i>cleaned</i> and stored in line with manufacturer's recommendations and site procedures
	5.5. Faults, malfunctions or problems with equipment are diagnosed and reported in line with site procedures
	5.6. Mechanical processor operation results are <i>recorded and reported</i> in line with site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely process trees, segregate and stack logs
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace; interpret, apply and convey information in written, diagrammatic and/or verbal form
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for mechanical processor operations
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for mechanical processor operations
- Detailed range of products
- Operational procedures and checks including start-up and shut-down procedures
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct mechanical processor operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to mechanical processor operations

EVIDENCE GUIDE

- following organisational policies and procedures relevant to mechanical processor operations
 - communicating effectively and working safely with others in the work area
 - planning, preparing and carrying out mechanical processor operations to safely and efficiently process trees mechanically and segregate and stack logs
 - conducting pre-operational checks and routine operational servicing of equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT**may include:**

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements**may include:**

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Mechanical processor

may be wheeled or tracked

Environmental protection measures

may include action to limit the impact to:

- ground growth and canopy

may include action to limit the impact of:

- soil and water
- general forest lean

RANGE STATEMENT

- wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - ground hazards
 - obstacles
- Work plan** is to include:
- instructions for mechanical processor operations including trees to be processed and cutting length requirements

and may include information about:

- landing layouts
- site plans
- forest operational plans
- emergency procedures in case of fire and/or accident
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- clients
- colleagues
- managers

Logs may include:

- full range of species
- size
- conditions encountered in local harvesting operations
- softwood or hardwood

Safe working conditions may include:

- identification of risks and hazards
- unsafe ground
- fences
- holes, pot holes
- materials
- vehicles
- abandoned equipment
- personnel
- adverse weather conditions (electrical storms, floods)
- fires

Mechanical processor operations the mechanical processing of trees and

RANGE STATEMENT

must include:

segregating and stacking of logs

and may include:

- the mechanical falling of trees
- the de-barking, pre-bunching and loading of logs

Planning

requires ensuring minimal equipment and product movement during operations including determining level and stable surfaces for safely relocating logs

Environmental and heritage concerns may include:

- dust
- noise
- water
- flora and fauna
- heritage legislation
- culturally sensitive sites and artefacts
- plantations
- native forest

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Capabilities

of equipment and/or attachments may include:

- efficient and safe operating speed
- duration of operation
- type of activities performed
- weight and/or load limitations
- operating limitations

Pre-operational checks

are conducted to ensure equipment and attachments have been set-up correctly, the systems are performing accurately and operating to optimum performance

and may be to:

- visual and audio warning devices and lights
- engine and stop engine lights
- fluid levels

RANGE STATEMENT

- cab display instrumentation and gauges
- on-board computer systems, if relevant

and may also involve:

- start-up, park and shut-down procedures including safety mechanisms operation (horn, operating lights), correct location of equipment, vehicle security

Site conditions may include:

- wet, dry
- day, night
- stability of ground
- broken ground
- slope of working surface
- location of water table

Hazards may include:

- uneven/unstable terrain
- trees
- fires
- overhead and underground services
- bridges
- buildings
- excavations
- traffic
- embankment
- cuttings
- structures and hazardous materials

Emergency plan may include:

- notification of authorities
- evacuation procedures
- isolation procedures
- equipment shut-down procedures
- clean up
- first aid
- use of personal protective equipment and guarding
- access and exit

Positioning

of equipment is to ensure:

- machine stability to minimise movement during and between processing operations
- safe access to felled tree
- safe processing and placement clearance for the efficient extraction of processed logs

RANGE STATEMENT

Maintenance

of log stacks includes:

- providing for anticipated stock levels
- stock rotation requirements
- size
- segregation of lengths
- species
- grades

Visual assessment

of logs includes:

- identifying and determining species
- diameter, length, grade
- landing layout
- stock rotation requirements
- vehicle number

Visual inspection and fault finding procedures may include:

- danger tag
- personnel proximity
- tyres and rim condition
- wheel nuts and studs
- light positioning and cleanliness
- radiator top up tank
- oil leaks, fuel leaks, water leaks
- no combustible material around exhaust
- damage to equipment
- portable fire extinguisher
- fire suppression system
- cab mounts
- windows
- engine oil to be checked before starting engine
- grease lines
- cab conditions
- checking fluid levels
- greasing
- tightening loose fittings
- filter changing

Routine operational servicing may include:

Cleaning methods may include:

- water
- steam
- degreasing
- vacuum
- forced air

RANGE STATEMENT

Records and reports may include:

- end of shift documentation
- work log
- supplies log
- computer readings

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Harvesting and Haulage

FPIHAR3211B Operate yarder

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to set up and operate the yarder, inspect and modify rigging, pull logs from the cutting area to the landing, and to control speed, braking, drums, positioning of chokers and manoeuvring of obstacles

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3211B Operate yarder

Application of the Unit

Application of the unit The unit involves operating a yarder in a forest or farm forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for yarder operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to operating a yarder are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>logs</i> to be extracted is identified and assessed for safe working conditions and <i>environmental protection measures</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Yarder</i> and <i>cable operation</i> activities are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set up yarder	<p>2.1. Yarder is moved to the <i>landing</i> in line with the logging code of practice</p> <p>2.2. Yarder is positioned on landing in line with planned</p>

ELEMENT**PERFORMANCE CRITERIA**

- system design and stable, level support base is ensured for *outriggers*
- 2.3. *Tower or spar* is inspected, rigged to suit system design and raised in line with manufacturer's recommendations and the logging code of practice
- 2.4. *Line shifts* are conducted with other personnel and yarder is operated to provide required line slack and tension to facilitate movements
3. Inspect and maintain cable systems
- 3.1. *System components* are observed during normal operations, faults noted and corrective action taken
- 3.2. System components are routinely inspected, *maintained*, repaired or replaced in line with the logging code of practice
- 3.3. *Guylines* are routinely inspected and tension adjusted to equalise load in line with the logging code of practice
- 3.4. *Blocks* are lubricated to maintain operational condition
- 3.5. Repetitive damage is diagnosed and the system design or operational practices reviewed and amended
4. Haul logs
- 4.1. *Pre start-up checks* are carried out on equipment in line with site requirements
- 4.2. Yarder operations are only performed in response to breakout, landing *signals* or own transmitted signals
- 4.3. Yarder *mechanical systems* are monitored, managed and controlled to maintain log alignment and satisfy safe operating limits in line with manufacturer's specifications
- 4.4. *Tension* is controlled in running and standing lines to optimise the lift and deflection consistency with payload and rope capacities
- 4.5. *Hang ups* and *obstacles* are anticipated and haul is halted and cleared in cooperation with the *rigging slinger*
- 4.6. Haul speed, line swing and *bridling* are used to position logs on the landing and payloads are controlled in cooperation with the *chaser*
- 4.7. Rigging is returned to extraction point and positioned in line with signals from the rigging slinger
- 4.8. Yarding process and equipment faults are *recorded*

ELEMENT**PERFORMANCE CRITERIA**

and reported to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate a yarder
- Communication skills and interpersonal techniques sufficient to use appropriate signals interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for yarder operation
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Characteristics of trees
- Organisational and site standards, requirements, policies and procedures for yarder operation
- Log extraction methods
- Cable logging and yarder operating techniques
- Rigging techniques and signal systems
- Industry standard lengths
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks

REQUIRED SKILLS AND KNOWLEDGE

- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently perform yarder operations to recover felled logs within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to yarder operations
- following organisational policies and procedures relevant to yarder operations
- conducting yarder operations to recover felled logs in line with the work order and within prescribed organisational tolerances
- setting up a yarder in line with site conditions
- assisting in shifting lines in line with the hook tender's instructions

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE

- workplace location or simulated workplace
- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different

RANGE STATEMENT

work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines

RANGE STATEMENT

- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the yarder operations to recover felled logs from the work site

and may include:

- type
- size
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Logs are to include:

- the finished product or trunk of a tree after trimming and cross cutting has occurred

and may be:

- hardwood or softwood
- for production or non-production purposes
- ground growth
- canopy
- general forest lean
- wind speed and direction

Environmental protection measures may include:

RANGE STATEMENT

- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions

Equipment may include:

- yarders (mobile and static, with one or more operational drums)
- rigging equipment

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine

Yarder

is the crane-like vehicle which winches the logs from the felling site to the landing using a cable system

methods include:

- inspecting and modifying rigging
- pulling logs from the cutting area to the landing
- controlling speed, braking, drums, positioning of chokers and manoeuvring of obstacles

Cable operations may include:

- activities covering a full range of species, log sizes, falling and retention densities, slope
- taking into consideration environmental requirements
- use of cable systems including high lead (no skyline), standing skyline and a running skyline with hauling both uphill and downhill
- logs attached optimising payload without exceeding the lift or haul capacity of the system

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

RANGE STATEMENT

Landing:	is the location where the yarder is positioned to receive the logs
Outriggers	are the hydraulic feet or pads put out by the yarder to level the operating base and securely set the yarder in place
Tower	is the crane like raised tower which the cables operate from to provide height for extraction of logs.
Spars	are the out-posted erections which provide elevation for the cables some distance from the yarder tower
Line shifts	are the moving of rigging lines from one area of operation to a new area
System components may include:	<ul style="list-style-type: none">• ropes• blocks• chains• shackles
Maintenance may include:	<ul style="list-style-type: none">• regular checks of the tower and components• diagnosis and repair of damaged components• maintenance of fluid levels and air pressures• refuelling and general maintenance
Guylines	support the tower or spar and other rigged erections to provide stability and strength during operation
Blocks	are pulleys cased in a block which aid in changing the direction of a force and to increase power or speed in conjunction with running cables
Pre start-up checks	are conducted to ensure: <ul style="list-style-type: none">• equipment has been set up correctly• the systems are performing accurately and operating to optimum performance
Signals may include:	<ul style="list-style-type: none">• whistle signals• air horns• visual signals• two-way radio• talk-e-tooter signals• other audible signals

RANGE STATEMENT

Mechanical systems are to include:

- haul speed and engine power
- yarder operational temperatures and pressures

Tension

is the level of strain or pressure upon cables and ropes

Hang ups

logs which are in the process of being extracted, become entangled or snagged with other objects, usually other standing trees

Obstacles may include:

- standing trees
- stumps
- rocks
- ground projections

Rigging slinger role includes:

- deciding what logs to take out first and being responsible for getting the logs to the landing without breaking them
- directing the choker setter personnel in hooking up logs
- transmitting signals to and from the yarder

Bridling

is the cable or chain extensions which assist with choker setting

Chasers

direct the landing of logs in conjunction with the yarder and unhook the logs at the landing site

Records and reports may include:

- yarder operations
- extraction methods
- tree type
- size
- length
- diameter
- inspection
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR3213B Conduct mechanically assisted tree falling operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to use machinery, winches and cables to push or pull trees away from their natural direction of fall

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

Application of the Unit

Application of the unit The unit involves conducting mechanically assisted tree falling operations in a forest or farm forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for <i>tree pushing or pulling</i>	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to conducting mechanically assisted tree falling operations are identified and followed</p> <p>1.2. <i>Work plan</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of trees to be pushed or pulled are identified and assessed for safe working conditions</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Tree pushing or pulling activities are planned in line with site procedures, taking into consideration environmental requirements where it is safe to do so</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Assess and plan tree pushing or pulling	<p>2.1. <i>Environmental conditions</i> are assessed and used to plan the felling of each tree</p> <p>2.2. Movement and whereabouts of other personnel is</p>

ELEMENT**PERFORMANCE CRITERIA**

- monitored and work modified to be in line with OHS regulations
- 2.3. Tree, location and *stability* are assessed for conditions likely to affect safety of tree pushing or pulling activities
- 2.4. Tree is visually assessed for *defects, grade* and recovery status
- 2.5. Growth around tree and escape route is selected and cleared either manually or mechanically
- 2.6. *Fall direction* and allowable degree of error are assessed, considering *hang ups*, damage and *extraction* constraints
- 2.7. *Cutting sequence* is planned to control direction of the fall and minimise damage to the tree and surrounding environment and communicated to other personnel
- 2.8. Trees too dangerous to be felled safely are marked and referred to appropriate personnel
3. Push or pull trees
- 3.1. *Pre start-up checks* are carried out on equipment in line with site requirements
- 3.2. *Leaders* are removed and cleared in line with the tree pushing or pulling plan
- 3.3. Unexpected characteristics of a tree are diagnosed and planning is reviewed
- 3.4. *Winches or cables or machinery* are secured and tensioned and scarf cut made in line with planned falling direction and OHS requirements
- 3.5. Appropriate cuts are made to assist the fall angle of the tree and should be placed below the scarf cut
- 3.6. Falling is completed once initiated and planned escape route used once the tree begins to fall
- 3.7. Movement of the tree on the ground is monitored until stable and trees which hang up are flagged and cleared immediately
- 3.8. Tree pushing or pulling process and equipment faults are *recorded and reported* to the appropriate personnel
4. Conduct operator maintenance
- 4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 4.2. *Chain* is checked for blunt or damaged condition
- 4.3. Chain and other components are removed, sharpened, maintained, adjusted and replaced in line

ELEMENT	PERFORMANCE CRITERIA
	with manufacturer's recommendations
	4.4. Tree pushing or pulling equipment is checked for operation and serviced
	4.5. Chainsaw set-up is assessed and adjusted to suit cutting conditions
	4.6. Chainsaw is kept in operational condition and checked to ensure it meets relevant standards prior to use

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely apply tree pushing or pulling techniques
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and maintain information relating to tree pushing or pulling
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting mechanically assisted tree falling operations
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Characteristics of trees and timber defects
- Organisational and site standards, requirements, policies and procedures for conducting mechanically assisted tree falling operations
- Tree pushing or pulling methods
- Chainsaw operation, cutting sequences and safety
- Chainsaw chain and tree pushing or pulling equipment condition assessment
- Established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently apply tree pushing or pulling techniques mechanically within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting mechanically assisted tree falling operations
 - following organisational policies and procedures relevant to conducting mechanically assisted tree falling operations
 - applying tree pushing or pulling techniques in line with the work plan and within prescribed organisational tolerances
 - conducting operator maintenance on a chainsaw
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Context of and specific resources for assessment

EVIDENCE GUIDE

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- Trees** are those in positions where conventional cutting techniques will not facilitate desired fall direction
- Pushed or pulled** is the process of felling trees away from their natural direction of fall using machinery, winches or cables by pushing or pulling with winches or cables held in position by wrapping the cables around the tree to be cut
- OHS requirements:** are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:
- personal protective equipment and clothing
 - safety equipment
 - first aid equipment
 - fire fighting equipment
 - hazard and risk control
 - fatigue management
 - erection of signs
 - elimination of hazardous materials and substances
 - safe forest practices including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Work plan** is to include
- instructions for tree pushing or pulling for the work site
- and may include:
- type
 - size
 - length
 - quantity
 - grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues

RANGE STATEMENT

- Equipment** may include:
- managers
 - machinery
 - excavators
 - winches
 - cables
 - chainsaws
 - specific safety attire
 - maintenance tools and equipment
- and is to include:
- procedures for chainsaw lock-out such as protecting operators and co-workers from accidental injury by isolating the machine
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening
 - questioning to clarify and confirm understanding
 - use of electronic communication devices
- Environmental conditions** may include:
- ground growth
 - ground slope
 - gullies
 - water courses
 - seed trees
 - habitat trees
 - ground hazards
 - obstacles
- Stability:** is the physical stability of the tree in-situ, that it is safe to fell and not likely to contain wet or dry rot
- Defects** may include:
- shakes
 - insect defects
 - knots
 - resin pockets
- Grade** is to include:
- evaluation of the tree for defects
 - quality and size of log return
- Fall direction** is the natural direction the tree will fall considering its degree of natural lean or its ground position on a slope or in a gully

RANGE STATEMENT

Hang ups	are trees which become entangled or snagged with other objects, usually other standing trees and do not fall completely to the ground
Extraction	is the method of removing the log from the worksite with mechanical equipment and cables, considering site conditions and specific log location
Cutting sequence	is the best direction or angle for making cuts to facilitate achieving the required fall direction
Pre start-up checks	are conducted to ensure: <ul style="list-style-type: none">• equipment has been set-up correctly• the systems are performing accurately and operating to optimum performance
Leaders are to include:	<ul style="list-style-type: none">• new tree growth from the base or near the base of the tree
Winches or cables	are the equipment used to assist the tree falling in an opposing direction to its natural fall by wrapping the cables around the tree and another object, combined by the winch, pressure is brought on the tree to fall in an opposing direction
Machinery may include:	<ul style="list-style-type: none">• excavators
Records and reports may include:	<ul style="list-style-type: none">• tree type• size• length• diameter• inspection• grading and labelling outcomes• storage locations• quality outcomes• hazards• incidents• equipment malfunctions and may be: <ul style="list-style-type: none">• manual• using a computer-based system or another appropriate organisational communication system

RANGE STATEMENT

Chain

- is the fast moving component surrounding the chainsaw blade containing many linked teeth

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR3214C Operate a single grip harvester

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate a single grip harvester. The unit includes planning and preparation for work, the conduct of operational checks, and the safe and effective operation of the single grip harvester for a range of mandatory tasks. It also includes the fitting, use and removal of cutting attachments and operator maintenance activities

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3214B Operate a single grip harvester

Application of the Unit

Application of the unit

The unit involves operating a single grip harvester in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operation	<p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to operating a single grip harvester are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Type and quantity of material to be processed with a <i>single grip harvester</i> is assessed and prepared</p> <p>1.5. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. Single grip harvester operations are planned in line with site procedures and <i>environmental and heritage concerns</i></p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Operate a single grip harvester	<p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. <i>Pre start-up checks</i> are carried out on equipment in line with manufacturer's recommendations and site</p>

ELEMENT	PERFORMANCE CRITERIA
	requirements
	2.3. Single grip harvester controls and functions, including manoeuvrability are checked for serviceability and any faults are rectified or reported
	2.4. Site <i>hazards</i> associated with single grip harvester operations are detected and safe operating techniques are used to minimise risk
	2.5. Operating techniques for the single grip harvester are applied to achieve optimum efficiency in line with manufacturer's design specifications
	2.6. Single grip harvester is operated in line with operating procedures
	2.7. <i>Emergency plan procedures are followed in line with OHS, environmental, legal and site requirements</i>
3. Fell and process trees	3.1. Communication practices associated with processing of materials are conducted in line with site procedures and checked between parties
	3.2. <i>Single grip harvesting head</i> is used in line with safe working requirements and OHS legislation
	3.3. Machinery is positioned ensuring <i>stability</i> and located to effectively process felled trees in line with job specifications
	3.4. Felled trees are processed safely and effectively in line with industry safety standards and manufacturer's specifications
4. Select, remove and fit cutting attachments	4.1. <i>Cutting attachment</i> is selected for the <i>task</i>
	4.2. Cutting attachment is removed and fitted in line with manufacturer's recommendations and site requirements
	4.3. Cutting attachment is tested to ensure correct fitting and operation as specified in manufacturer's recommendations
	4.4. Cutting attachment is used in line with manufacturer's recommendations and design limits
	4.5. Removed attachments are cleaned and stored in designated location in line with manufacturer's recommendations
5. Carry out machine operator maintenance	5.1. Single grip harvester is safely parked, shut-down and prepared for maintenance in line with manufacturer's recommendations and organisational requirements
	5.2. Visual inspection and fault finding operations are

ELEMENT**PERFORMANCE CRITERIA**

- conducted in line with manufacturer's recommendations and organisational requirements
- 5.3. Defective parts are removed and replaced safely and effectively in line with manufacturer's recommendations and organisational requirements
- 5.4. Regular programmed maintenance tasks are carried out in line with manufacturer's recommendations and organisational requirements
- 5.5. Work area is cleared and materials disposed of or recycled in line with site environmental management plan
- 5.6. Plant, tools and equipment are cleaned, checked, maintained and stored in line with manufacturer's recommendations and standard work practices
- 5.7. Single grip harvester operational *records and reports* are completed accurately and processed in line with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment: efficiently and safely operate a single grip harvester
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a single grip harvester
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

- material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a single grip harvester
- Single grip harvester operations and operating techniques
- Single grip harvester capabilities and attachments
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently operate a single grip harvester in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to operating a single grip harvester
- following organisational policies and procedures relevant to operating a single grip harvester
- following applicable licensing or certification requirements
- communicating and working safely with others in the work area

EVIDENCE GUIDE

Context of and specific resources for assessment

- operating a single grip harvester to fell, delimb and cut trees to length in line with site requirements
- changing and fitting a single grip harvester cutting attachment in line with manufacturer's specifications
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations,

RANGE STATEMENT

certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Organisational requirements
may include:

Environmental protection measures

may include action to limit the impact to:

- ground growth and canopy
- soil and water

may include action to limit the impact of:

- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- ground hazards
- obstacles

RANGE STATEMENT

Work order is to include:

- instructions for the operation of a single grip harvester and its respective tasks

and may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment is to include:

- single grip harvesters
- relevant maintenance equipment
- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine

Environmental and heritage concerns may include:

- dust
- noise
- water
- flora and fauna
- heritage legislation
- culturally sensitive sites and artefacts
- plantations
- native forest

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- attachments are fitted accurately
- plant is operating to optimum performance

Hazards may include:

- uneven/unstable terrain
- trees
- fires

RANGE STATEMENT

- overhead and underground services
 - bridges
 - buildings
 - excavations
 - traffic
 - embankment
 - cuttings
 - structures and hazardous materials
- Emergency plan** may include:
- notification of authorities
 - evacuation procedures
 - isolation procedures
 - equipment shut-down procedures
 - clean up
 - first aid
 - use of personal protective equipment and clothing
 - guarding
 - access and exit
- Single grip harvesting head** is a piece of equipment capable of felling and processing trees, attached to a tracked or wheeled carrier
- Stability** is to ensure the single grip harvester is positioned and secured so as not to topple over during operations
- Cutting attachments** may include:
- sprocket
 - bar and chain components used for felling or docking trees
- Tasks** may include processing materials such as:
- felling
 - delimiting
 - measuring
 - bucking
 - cutting to length
 - topping
 - piling
- Records and reports** may include:
- cable recovery operations
 - extraction methods
 - hazards
 - incidents or equipment malfunctions

RANGE STATEMENT

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Harvesting and Haulage

FPIHAR3215C Operate a heavy production mobile chipper

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to operate a heavy production mobile chipping unit to chip logs or tree lengths on-site during forest harvesting operations

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR321B Operate a heavy production mobile chipper

Application of the Unit

Application of the unit The unit involves operating a heavy production mobile chipping unit in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------------|--|
| 1. Plan and prepare for chipping | <p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to operating a heavy production mobile chipping unit are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Type and quantity of <i>timber</i> to be chipped is identified and assessed for safe working conditions</p> <p>1.5. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. <i>Chipping</i> activities are planned in line with site procedures and <i>environmental and heritage concerns</i></p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Chip timber | <p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. <i>Chipping unit</i> is positioned, secured and set up in line with manufacturer's specifications</p> <p>2.3. <i>Pre start-up checks</i> are carried out on equipment in line with manufacturer's recommendations and site requirements</p> |

ELEMENT**PERFORMANCE CRITERIA**

- | | | |
|----|--|---|
| 3. | Carry out machine operator maintenance | 2.4. Site <i>hazards</i> associated with heavy production mobile chipper operations are detected and safe operating techniques are used to minimise risk
2.5. Timber is fed into the chipper at a rate applicable to the <i>capacity</i> of the machinery and product quality
2.6. Timber is chipped to the <i>chip sizes</i> set on the chipping unit in line with the work order
2.7. Chipped timber is fed into the back of a truck or other modes of <i>transportation</i>
2.8. Communication with others is maintained in line with OHS requirements
2.9. <i>Emergency plan procedures</i> are followed <i>in line with OHS, environmental, legal and site requirements</i>
3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
3.2. Chipper is checked for blunt or damaged condition
3.3. Components are removed, maintained, adjusted and replaced in line with manufacturer's recommendations
3.4. Chipper set-up is assessed and adjusted to suit chipping conditions
3.5. Chipper is kept clear of <i>foreign matter</i> and checked to ensure it meets relevant standards prior to use
3.6. Chipping processes and equipment faults are <i>recorded and reported</i> to appropriate personnel |
|----|--|---|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate a heavy production mobile chipper, effectively assess condition of chipper
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and maintain workplace information,

REQUIRED SKILLS AND KNOWLEDGE

and documentation

- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a heavy production mobile chipper
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a heavy production mobile chipper
- Characteristics of trees and timber defects
- Heavy production chipping procedures
- Heavy production mobile chipper operation and safety
- Chip types and quality
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently operate a heavy production mobile chipper in line with organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to operating a heavy production mobile chipper
- following organisational policies and procedures relevant to operating a heavy production mobile chipper
- communicating and working safely with others in the work area
- operating a heavy production mobile chipper in line with the work order and within prescribed organisational tolerances
- conducting operator maintenance on a heavy production mobile chipping unit

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required

EVIDENCE GUIDE

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements may include:**
- legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - heritage and traditional land owner issues
- Organisational requirements may include:**
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)

RANGE STATEMENT

Environmental protection measures

may include action to limit the impact to:

- ground growth and canopy
- soil and water

may include action to limit the impact of:

- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- ground hazards
- obstacles

Work order is to include:

- instructions for the chipping and despatch of chipped timber from the work site

and may include:

- type
- size
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Timber may include:

- complete logs
- log segments
- whole trees
- tree heads

Equipment may include:

- heavy production mobile chipping units
- specific safety attire
- maintenance tools and equipment

and is to include:

- procedures for equipment lock-out, i.e. protecting operators and co-workers from

RANGE STATEMENT

	accidental injury by isolating the machine
Chipping	is the process of converting timber into varying chip sizes using mechanised chipping units, useable on-site during forestry harvesting operations
Environmental and heritage concerns may include:	<ul style="list-style-type: none">• dust• noise• water• flora and fauna• heritage legislation• culturally sensitive sites and artefacts• plantations• native forest
Communication may include:	<ul style="list-style-type: none">• verbal and non-verbal language• hand or other agreed signals• eye contact with other operators or personnel• active listening• questioning to clarify and confirm understanding• use of electronic communication devices
Chipping unit may include:	<ul style="list-style-type: none">• heavy production mobile chipping units including:<ul style="list-style-type: none">• truck mounted heavy production chipping units• trailer mounted chipping units• independently driven motorised mobile chipping units feeding into a truck or other form of transportation• petrol or diesel driven units that contain high powered spinning cutters which cut timber into chips
Pre start-up checks	are conducted to ensure: <ul style="list-style-type: none">• equipment has been set-up correctly• systems are performing accurately and operating to optimum performance
Hazards may include:	<ul style="list-style-type: none">• uneven/unstable terrain• trees• fires• overhead and underground services• bridges

RANGE STATEMENT

- buildings
- excavations
- traffic
- embankment
- cuttings
- structures and hazardous materials

Capacity is the capacity of the machinery to cope with certain size diameters of log or branch or the speed by which timber is fed into the chipper

Chip sizes may vary, dependent on the customer or work order and the capability of the chipper

Transportation may include:

- high trailers
- trucks
- rail cars
- other applicable forms of transport

Emergency plan may include:

- notification of authorities
- evacuation procedures
- isolation procedures
- equipment shut-down procedures
- clean up
- first aid
- use of personal protective equipment and clothing
- guarding
- access and exit

Foreign matter is the contamination of chip, stones, rocks, metal and other foreign matter which may blunt the cutters or affect operation of the chipper

Records and reports may include:

- timber type, size
- quality outcomes
- storage locations
- quality outcome
- hazards
- incidents or equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Harvesting and Haulage

FPIHAR3216A Conduct forestry operations using crawler tractor

Modification History

Revision 2

Updated formatting of Performance Criteria 2.7. No content change.

Unit Descriptor

Unit descriptor This unit describes the outcomes required to conduct forestry operations using crawler tractor including planning and preparation for work, conducting operational checks, the safe and effective operation of the crawler for a range of mandatory tasks, use of attachments and operator maintenance activities

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3203B Conduct crawler operations

Application of the Unit

Application of the unit The unit involves conducting forestry operations using crawler tractor in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for <i>crawler</i> operation	<p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to conducting <i>forestry operations using crawler tractor</i> are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Type and quantity of material to be moved with a crawler is assessed and prepared</p> <p>1.5. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. Crawler operations are planned in line with site procedures and site <i>environmental and heritage concerns</i></p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Operate crawler	<p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. Equipment <i>pre start-up checks</i> are carried out in line</p>

ELEMENT**PERFORMANCE CRITERIA**

- with manufacturer's recommendations and site requirements
- 2.3. Crawler controls and functions, including implements or other attachments, brakes and manoeuvrability are checked for serviceability and any faults are rectified or reported
- 2.4. Site *hazards* associated with crawler operations are detected and safe operating techniques are used to minimise risk
- 2.5. Operating techniques for the crawler are applied to achieve optimum efficiency in line with manufacturer's design specifications
- 2.6. Crawler is operated to work instructions in line with site operating procedures
- 2.7. *Emergency plan* procedures are followed in line with OHS, environmental, legal and site requirements
3. Carry out machine operator maintenance
- 3.1. Crawler is safely parked, shut-down and prepared for maintenance in line with manufacturer's manual and organisational requirements
- 3.2. Visual inspection and fault finding processes are conducted in line with manufacturer's recommendations and organisational requirements
- 3.3. Defective parts are removed and replaced safely and effectively in line with manufacturer's manual and organisational requirements
- 3.4. Regular programmed maintenance *tasks* are carried out in line with manufacturer's and organisational requirements
- 3.5. Work area is cleared and waste materials are disposed of or recycled in line with site environmental management plan
- 3.6. Plant, tools and equipment are cleaned, checked, maintained and stored in line with manufacturer's recommendations and standard work practices
- 3.7. Crawler operational *records and reports* are completed accurately and processed in line with site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and efficiently and safely conduct forestry operations using crawler tractor
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting forestry operations using crawler tractor
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for conducting forestry operations using crawler tractor
- Crawler operation techniques and capabilities
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct forestry operations using crawler tractor in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting forestry operations using crawler tractor
- following organisational policies and procedures relevant to conducting forestry operations using crawler tractor
- communicating effectively and working safely with others in the work area
- conducting crawler operations in line with site requirements

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Crawler is a self-propelled tracked or wheeled purpose designed machine with an attachment mounted at the front end

OHS requirements: are to be in with applicable Commonwealth, State

RANGE STATEMENT

or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards

RANGE STATEMENT

- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Environmental protection measures

may include action to limit the impact to:

- ground growth and canopy
- soil and water

may include action to limit the impact of:

- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- ground hazards
- obstacles

Work order is to include:

- instructions for the operation of a crawler and its respective tasks

and may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment is to include:

- crawlers and relevant maintenance equipment
- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine

Environmental and heritage concerns may include:

- dust
- noise
- water
- flora and fauna

RANGE STATEMENT

- heritage legislation
 - culturally sensitive sites and artefacts
 - plantations
 - native forest
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening
 - questioning to clarify and confirm understanding
 - use of electronic communication devices
- Pre start-up checks** are conducted to:
- ensure the equipment has been set-up correctly
 - plant operating to optimum performance
- Hazards** may include:
- uneven/unstable terrain
 - trees
 - fires
 - overhead and underground services
 - bridges
 - buildings
 - excavations
 - traffic
 - embankment
 - cuttings
 - structures and hazardous materials
- Emergency plan** may include:
- notification of authorities
 - evacuation procedures
 - isolation procedures
 - equipment shut-down procedures
 - clean up
 - first aid
 - use of personal protective equipment and clothing
 - guarding
 - access and exit
- Tasks** may include:
- tree removal
 - stripping
 - spreading materials
 - stockpiling

RANGE STATEMENT

- bulk excavation
- land clearing
- track rolling
- ripping
- push loading
- scrapers
- grapple operations for logging
- towing equipment
- working in tandem
- winching
- boxing
- constructing fire breaks
- end of shift documentation
- work log

Records and reports may include:

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Harvesting and Haulage

FPIHAR3217A Conduct skidder operations

Modification History

Release 2

Fixed formatting of Performance Criteria 2.7. No content change.

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to conduct skidder operations including planning and preparation for work, conducting operational checks, the safe and effective operation of the skidder for a range of mandatory tasks, the use of attachments and operator maintenance activities

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3204B Conduct skidder operations

Application of the Unit

Application of the unit

The unit involves conducting skidder operations in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Plan and prepare for <i>skidder</i> operations | <p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to conducting <i>skidder</i> operations are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Type and quantity of material to be moved with a skidder is assessed and prepared</p> <p>1.5. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. Skidder operations are planned in line with site procedures and <i>environmental and heritage concerns</i></p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Operate skidder | <p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. <i>Pre start-up checks</i> are carried out on equipment in line with manufacturer's recommendations and site</p> |

ELEMENT**PERFORMANCE CRITERIA**

- requirements
- 2.3. Skidder controls and functions, including implements, brakes and manoeuvrability are checked for serviceability and any faults are rectified or reported
- 2.4. Site *hazards* associated with skidder operations are detected and safe operating techniques are used to minimise risk
- 2.5. Operating techniques for the skidder are applied to achieve optimum efficiency in line with manufacturer's' design specifications
- 2.6. Skidder is operated to work instructions in line with company operating procedures
- 2.7. *Emergency plan* procedures are followed in line with OHS, environmental, legal and site requirements
3. Attach, secure, lift, carry and place materials
- 3.1. Communication practices associated with transportation and lifting of materials are conducted in line with site procedures and continued between parties
- 3.2. *Log control* methods are established
- 3.3. *Lifting or towing gear* is selected, attached and used in line with safe working load requirements and OHS legislation
- 3.4. Machinery is positioned ensuring *stability* and located to effectively shift materials in line with job specifications
- 3.5. Load is shifted safely and effectively in line with industry safety standards and manufacturer's' specifications
- 3.6. Load is moved in line with conventional hand and audible signals that meet OHS legislation and/or site procedures
4. Carry out machine operator maintenance
- 4.1. Skidder is safely parked, shut-down and prepared for maintenance in line with manufacturer's manual and organisational requirements
- 4.2. Visual inspection and fault finding processes are conducted in line with manufacturer's recommendations and organisational requirements
- 4.3. Defective parts are removed and replaced safely and effectively in line with manufacturer's manual and organisational requirements
- 4.4. Regular programmed maintenance tasks are carried

ELEMENT**PERFORMANCE CRITERIA**

- out in line with manufacturer's and organisational requirements
- 4.5. Work area is cleared and waste materials are disposed of or recycled in line with site environmental management plan
- 4.6. Plant, tools and equipment are cleaned, checked, maintained and stored in line with manufacturer's recommendations and standard work practices
- 4.7. Skidder operational *records and reports* are completed accurately and processed in line with site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and efficiently and safely operate a skidder
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting skidder operations
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for conducting skidder operations
- Skidder operating techniques
- Skidder capabilities
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding

REQUIRED SKILLS AND KNOWLEDGE

techniques

- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct skidder operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting skidder operations
- following organisational policies and procedures relevant to conducting skidder operations
- following applicable licensing or certification requirements
- communicating effectively and working safely with others in the work area
- conducting skidder operations in line with site requirements

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

EVIDENCE GUIDE

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Skidder

is a self-propelled wheeled and articulated purpose designed machine used to haul timber over rough terrain. The skidder moves timber from the forest to the landing

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment

RANGE STATEMENT

Organisational requirements may include:

- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Environmental protection measures

may include action to limit the impact to:

- ground growth and canopy
- soil and water

may include action to limit the impact of:

- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- ground hazards
- obstacles

Work order is to include:

- instructions for the operation of a skidder and its respective tasks

and may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

RANGE STATEMENT

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment is to include:

- grapple or cable skidders
- relevant maintenance equipment
- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine

Environmental and heritage concerns may include:

- dust
- noise
- water
- flora and fauna
- heritage legislation
- culturally sensitive sites and artefacts
- plantations
- native forest

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- plant is operating to optimum performance

Hazards may include:

- uneven/unstable terrain
- trees
- fires
- overhead and underground services
- bridges
- buildings
- excavations
- traffic
- embankments
- cuttings
- structures and hazardous materials

RANGE STATEMENT

Emergency plan may include:

- notification of authorities
- evacuation procedures
- isolation procedures
- equipment shut-down procedures
- clean up
- first aid
- use of personal protective equipment and clothing
- guarding
- access and exit

Log control

is the balance and control of logs while carrying or towing as prescribed by the manufacturer, not exceeding the allowable capacity of the skidder

Lifting or towing gear may include:

- grapples
- cables

Stability

is to ensure the skidder is positioned and operates so as not to topple over during operations

Tasks may include:

- extraction of logs to the landing
- ancillary forestry activities
- end of shift documentation
- work log

Records and reports may include:

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field

Harvesting and Haulage

FPIHAR3218A Conduct loader operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to conduct loader operations including planning and preparation for work, conducting operational checks, the safe and effective operation of the loader for a range of mandatory tasks, the use of attachments and operator maintenance activities

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR3205B Conduct loader operations

Application of the Unit

Application of the unit The unit involves conducting loader operations in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for <i>loader</i> operations	<p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to conducting loader operations are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Type and quantity of material to be moved with a <i>loader</i> is assessed and prepared</p> <p>1.5. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. Loader operations are planned in line with site procedures and <i>environmental and heritage concerns</i></p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Operate loader	<p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p> <p>2.2. <i>Pre start-up checks</i> are carried out on equipment in line with manufacturer's recommendations and site</p>

ELEMENT**PERFORMANCE CRITERIA**

- requirements
- 2.3.Loader controls and functions, including implements or other attachments, brakes and manoeuvrability are checked for serviceability and any faults are rectified or reported
- 2.4.Site *hazards* associated with loader operations are detected and safe operating techniques are used to minimise risk
- 2.5.Operating techniques for the loader are applied to achieve optimum efficiency in line with manufacturer's design specifications
- 2.6.Loader is operated to work instructions in line with company operating procedures
- 2.7.*Emergency plan procedures are followed in line with OHS, environmental, legal and site requirements*
3. Attach, secure, lift, carry and place materials
- 3.1.Communication practices associated with transportation and lifting of materials are conducted in line with site procedures and continued between parties
- 3.2.*Weight of load* is established in line with site procedures
- 3.3.*Lifting gear* is selected, attached and used in line with safe working load requirements and OHS legislation
- 3.4.Machinery is positioned ensuring *stability* and located to effectively shift materials in line with job specifications
- 3.5.Load is shifted safely and effectively in line with industry safety standards and manufacturer's specifications
- 3.6.Load is moved in line with conventional hand and audible signals that meet OHS legislation and/or work site procedures
4. Segregate and stack logs
- 4.1.Planned landing layout and log handling procedures are identified from work order
- 4.2.Location of stacks provides space for other landing operations and access to all appropriate site equipment
- 4.3.Log stacks are positioned and maintained in accordance with planned layout to provide for anticipated stock levels, stock rotation requirements, size, segregation of lengths, species and grades

ELEMENT	PERFORMANCE CRITERIA
	4.4.Stacks are constructed to provide stability and minimise problems from slippage and falling of logs
	4.5.Logs delivered to landing are <i>visually assessed</i>
	4.6.Logs are directed or moved to appropriate location for further processing or stacking consistent with species, diameter, length, grade, landing layout and stock rotation requirements
	4.7.Logs are identified and records maintained in accordance with standard site procedures
5. Load and unload logs	5.1.Work is planned to minimise equipment and log movement and to load/unload logs safely in accordance with regulations and site operating plans and procedures
	5.2.Loader is positioned to enable access to the logs to be loaded/unloaded within load reach and movement limits
	5.3.Weight of logs is <i>estimated</i> to determine <i>lifting</i> requirement and compliance to load plate
	5.4.Logs are segregated or selected by size and grade in accordance with work requirements and logs suitable for base and side of load are selected, transferred and placed
	5.5.Individual logs are separated and rolled/lifted using all relevant movements in accordance with normal equipment operating procedures
	5.6.Logs are bunched using lifting gear to optimise loaded movements
	5.7.Trial lift is carried out when warranted by load size or stability and load is lowered for corrective action to be taken where unacceptable operational situation is revealed
	5.8.Loads are lifted, turned and placed using all relevant equipment movements in accordance with standards and regulations to achieve optimum load shape
	5.9.Logs which do not meet requirements for size or grade - within the scope of operator's knowledge - are rejected or referred to others for regrading
	5.10. Logs are supported or compressed to enable placement of slipper or chocks where necessary
	5.11. Placement of logs meets all requirements for positioning, ensuring stability of load and stack is maintained at all times
6. Carry out machine	6.1.Loader is safely parked, shut-down and prepared for

ELEMENT	PERFORMANCE CRITERIA
operator maintenance	<p>maintenance in line with manufacturer's manual and organisational requirements</p> <p>6.2. Inspection and fault finding processes are conducted in line with manufacturer's recommendations and organisational requirements</p> <p>6.3. Defective parts are removed and replaced safely and effectively in line with manufacturer's manual and organisational requirements</p> <p>6.4. Regular programmed maintenance tasks are carried out in line with manufacturer's and organisational requirements</p> <p>6.5. Work area is cleared and waste materials are disposed of or recycled in line with site environmental management plan</p> <p>6.6. Plant, tools and equipment are cleaned, checked, maintained and stored in line with manufacturer's recommendations and standard work practices</p> <p>6.7. Loader operational <i>records and reports</i> are completed accurately and processed in line with site procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and efficiently and safely operate a loader
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for conducting loader operations

- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for conducting loader operations
- Loader operating techniques
- Loader capabilities and attachments
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct loader operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting loader operations
- following organisational policies and procedures relevant to conducting loader operations
- communicating effectively and working safely with

EVIDENCE GUIDE

- others in the work area
- conducting loader operations in line with site requirements
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Loader

- is a self-propelled, tracked, wheeled, stationary or purpose designed machine
- can load or excavate through forward motion of the machine
- can lift, transport and discharge material

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT**may include:**

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational requirements**may include:**

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Environmental protection measures

may include action to limit the impact to:

- ground growth and canopy
- soil and water

may include action to limit the impact of:

- general forest lean
- wind speed and direction

RANGE STATEMENT

- fallen trees
 - density of trees
 - ground slope
 - ground hazards
 - obstacles
- Work order** is to include:
- instructions for the operation of a loader and its respective tasks
- and may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** is to include:
- loaders
 - relevant maintenance equipment
 - procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine
- Environmental and heritage concerns** may include:
- dust
 - noise
 - water
 - flora and fauna
 - heritage legislation
 - culturally sensitive sites and artefacts
 - plantations
 - native forest
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening
 - questioning to clarify and confirm understanding
 - use of electronic communication devices
- Pre start-up checks** are conducted to ensure:
- equipment has been set-up correctly

RANGE STATEMENT

Hazards may include:	<ul style="list-style-type: none">• plant is operating to optimum performance• uneven/unstable terrain• trees• fires• overhead and underground services• bridges• buildings• excavations• traffic• embankment• cuttings• structures and hazardous materials
Emergency plan may include:	<ul style="list-style-type: none">• notification of authorities• evacuation procedures• isolation procedures• equipment shut-down procedures• clean up• first aid• use of personal protective equipment and clothing• guarding• access and exit
Weight of load	is that prescribed by the manufacturer as not exceeding the allowable capacity of the loader
Lifting gear may include:	<ul style="list-style-type: none">• slings• cables• grabs
Stability	is to ensure the loader is positioned and operates so as not to topple over during operations
Visual assessment of logs includes identifying and determining:	<ul style="list-style-type: none">• species• diameter• length• grade• landing layout• stock rotation requirements
Estimation	of timber weight is used to determine lifting requirements and compliance to load plate
Lifting	may be conducted on a trial basis when an issue

RANGE STATEMENT

with load size or stability or other unacceptable operational situation is determined

Tasks may include:

- tree removal
- stripping
- spreading materials
- stockpiling
- loading and unloading of trucks
- loading mill decks
- segregating and splitting of logs
- bulk excavation
- towing equipment
- working in tandem
- winching
- boxing
- end of shift documentation
- work log

Records and reports may include:

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Harvesting and Haulage

FPIHAR3219A Conduct excavator operations with grabs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to conduct excavator operations with grabs, including planning and preparation for work, the conduct of operational checks, the safe and effective operation of the excavator for a range of mandatory tasks, use of attachments and operator maintenance activities

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR320B Conduct excavator operations with grabs

Application of the Unit

Application of the unit The unit involves conducting excavator operations with grabs, in a forest environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operation	<p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to conducting excavator operations with grabs are identified and followed</p> <p>1.2. Site <i>environmental protection measures</i> are adhered to in line with relevant legislation and regulations</p> <p>1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4. Type and quantity of material to be moved with an <i>excavator</i> is assessed and prepared</p> <p>1.5. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. <i>Level and/or suitable surface for stability of equipment to be used is determined and confirmed</i></p> <p>1.7. Excavator operations are planned in line with site procedures and site <i>environmental and heritage concerns</i></p> <p>1.8. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Operate excavator	<p>2.1. All work is conducted in line with work order, environmental and OHS requirements</p>

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|---|--|
| 3. Lift, carry and place materials | <p>2.2. Pre start-up checks are carried out on equipment in line with manufacturer's recommendations and site requirements</p> <p>2.3. Excavator controls and functions, including implements, brakes and manoeuvrability are checked for serviceability and any faults are rectified or reported</p> <p>2.4. Site hazards associated with excavator operations are detected and safe operating techniques are used to minimise risk</p> <p>2.5. Operating techniques for the excavator are applied to achieve optimum efficiency in line with manufacturer's design specifications</p> <p>2.6. Excavator is operated to work instructions in line with organisational operating procedures</p> <p>2.7. Emergency plan procedures are followed in line with OHS, environmental, legal and site requirements</p> |
| 4. Carry out machine operator maintenance | <p>3.1. Communication practices associated with transportation and lifting of materials are conducted in line with work site procedures and checked between parties</p> <p>3.2. Weight of load is established in line with operating procedures</p> <p>3.3. Lifting gear is selected, attached and used in line with safe working load requirements and OHS legislation</p> <p>3.4. Machinery is positioned ensuring stability and located to effectively shift materials in line with job specifications</p> <p>3.5. Load is shifted safely and effectively in line with industry safety standards and manufacturer's recommendations</p> <p>3.6. Load is moved in line with conventional hand and audible signals that meet OHS legislation and/or work site procedures</p> |
| | <p>4.1. Excavator is safely parked, prepared for maintenance and shut-down in line with manufacturer's manual and organisational requirements</p> <p>4.2. Inspection and fault finding are conducted in line with manufacturer's recommendations and organisational requirements</p> <p>4.3. Defective parts are removed and replaced safely and</p> |

ELEMENT**PERFORMANCE CRITERIA**

- effectively in line with manufacturer's manual and organisational requirements
- 4.4.Regular programmed maintenance tasks are carried out in line with manufacturer's and organisational requirements
- 4.5.Work area is cleared and materials disposed of or recycled in line with site environmental management plan
- 4.6.Plant, tools and equipment are cleaned, checked, maintained and stored in line with manufacturer's recommendations and standard work practices
- 4.7.Excavator operational *records and reports* are completed accurately and processed in line with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate an excavator
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for conducting excavator operations with grabs
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for conducting excavator operations with grabs

REQUIRED SKILLS AND KNOWLEDGE

- Excavator operations and operating techniques
- Excavator capabilities
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use and maintenance including equipment safety requirements
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently conduct excavator operations with grabs in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to conducting excavator operations with grabs
- following organisational policies and procedures relevant to conducting excavator operations with grabs
- communicating and working safely with others in the work area
- conducting excavator operations with grabs in line with site requirements

Context of and specific resources for

- Competency is to be assessed in the workplace or realistically simulated workplace

EVIDENCE GUIDE

assessment

- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment

EVIDENCE GUIDE

task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards

RANGE STATEMENT

- confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - heritage and traditional land owner issues
 - legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Organisational requirements** may include:
- Environmental protection measures** may include action to limit the impact to:
- ground growth and canopy
- may include action to limit the impact of:
- soil and water
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - ground hazards
 - obstacles
- Work order** is to include:
- instructions for the operation of an excavator and its respective tasks
- and may include:
- instructions for the environmental monitoring

RANGE STATEMENT

- of work and procedures
- environmental care requirements relevant to the work
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Appropriate personnel** may include:
- Excavator** is a self-propelled tracked or wheeled machine with an upper structure capable of a minimum of 360° rotation which lifts, elevates, swings and discharges material by the action of attachments fitted to the boom and arm or telescoping boom, without moving the chassis or undercarriage during any part of the working cycle of the machine
- Equipment** may include:
- excavators and relevant maintenance equipment
 - bucket
 - forks
 - grabs
 - procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine
- Environmental and heritage concerns** may include:
- dust
 - noise
 - water
 - flora and fauna
 - heritage legislation
 - culturally sensitive sites and artefacts
 - plantations
 - native forest
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening
 - questioning to clarify and confirm understanding
 - use of electronic communication devices
- Pre start-up checks** are conducted to ensure:

RANGE STATEMENT

Hazards may include:

- equipment has been set-up correctly
- plant is operating to optimum performance
- uneven/unstable terrain
- trees
- fires
- overhead and underground services
- bridges
- buildings
- excavations
- traffic
- embankments
- cuttings
- structures
- hazardous materials

Emergency plan may include:

- notification of authorities
- evacuation procedures
- isolation procedures
- equipment shut-down procedures
- clean up
- first aid
- use of personal protective equipment and clothing
- guarding
- access and egress

Weight of load

is that prescribed by the manufacturer as not exceeding the allowable capacity of the excavator

Lifting gear may include:

- slings
- cables
- grabs

Stability

is to ensure the excavator is positioned and secured so as not to topple over during operations

Tasks may include:

- lifting and moving materials
- tree removal
- stripping
- spreading materials
- stockpiling
- bulk excavation
- land clearing
- towing equipment

RANGE STATEMENT

Records and reports may include:

- working in tandem
- winching
- boxing
- constructing fire breaks
- end of shift documentation
- work log

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Harvesting and Haulage

FPIHAR3220 Harvest trees manually (intermediate)

Modification History

Version	Detail
1	Unit replaces FPIHAR3202A Harvest trees manually (intermediate)

Unit Descriptor

This unit specifies the outcomes required to assess, plan and safely carry out manual tree-felling operations using a chainsaw in a commercial harvesting environment. This unit covers the felling procedures for trees with a level of complexity that requires significant tree assessment and practical felling skills. Persons competent in this unit should be able to effectively fell most trees with the exception of the very large, and those with significant defects and/or characteristics causing excessive complexity. Techniques for trees with a diameter greater than the bar length would generally be regarded as within the scope of this unit.

Application of the Unit

This unit involves felling trees in a commercial harvesting operation in a forest environment producing forest products.

These skills and knowledge are to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions.

Pre-Requisites

Not applicable

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine harvesting requirements	<p>1.1 Identify and comply with applicable <i>occupational health and safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to harvesting <i>trees</i></p> <p>1.2 Identify and adhere to site <i>environmental protection measures</i> according to <i>harvesting plan</i> and relevant legislation and regulations</p> <p>1.3 Review <i>job requirements</i> and check as required with <i>appropriate personnel</i></p> <p>1.4 Identify <i>log extraction method</i> and requirements</p> <p>1.5 Identify <i>requirements for product quality</i></p> <p>1.6 Determine harvesting requirements, and plan tree felling sequence and general falling directions</p> <p>1.7 Establish and maintain <i>communication</i> with others according to OHS requirements</p>
2. Assess harvest site	<p>2.1 Assess location and stability of harvest site for conditions likely to affect harvesting activities</p> <p>2.2 Identify and assess <i>environmental conditions</i> according to harvest plan</p> <p>2.3 Identify trees to be felled according to harvest plan</p> <p>2.4 Assess factors affecting harvesting requirements and detect and control specific forest or site risks and <i>hazards</i></p> <p>2.5 Note and monitor other personnel working on the site</p>

ELEMENT	PERFORMANCE CRITERIA
	and modify activity where required
3. Visually assess trees and plan felling	<p>3.1 Locate and visually assess trees for felling characteristics</p> <p>3.2 Check planned falling direction and propose deviation if required</p> <p>3.3 Select cutting pattern to optimise time and manageable removal of sections</p> <p>3.4 Plan sequence of cuts to fell tree according to standard felling procedures and log quality requirements</p> <p>3.5 Identify <i>trees considered outside own skill</i> level and seek assistance from appropriate personnel</p> <p>3.6 Select suitable escape route</p> <p>3.7 Clear work site and escape route of growth and debris according to environmental care principles and statutory requirements</p>
4. Prepare equipment	<p>4.1 Select <i>tools and equipment</i> appropriate to work requirements and check them for operational effectiveness according to manufacturer recommendations</p> <p>4.2 Sharpen and adjust chainsaw or change components according to manufacturer recommendations</p> <p>4.3 Carry out pre start-up checks on equipment according to felling requirements</p>
5. Fell trees	<p>5.1 Fell individual trees using selected <i>cutting techniques</i> according to OHS and job requirements</p> <p>5.2 Adjust cutting technique in response to movement and condition of tree</p> <p>5.3 Use planned escape route when tree starts to fall</p> <p>5.4 Monitor fall and movement of tree on ground until determined stable</p>

ELEMENT	PERFORMANCE CRITERIA
	5.5 Fell trees to meet production levels, log extraction methods and site requirements
	5.6 Identify and implement procedures for removal of trees that are hung-up
6. Maintain equipment	6.1 Inspect equipment on completion of harvesting activities
	6.2 Identify damaged saws and cutting attachments for repair or replacement according to organisational requirements and manufacturer recommendations
	6.3 Remove, clean, adjust or replace chain and other components according to manufacturer recommendations
	6.4 Maintain tools and equipment according to OHS requirements and manufacturer recommendations

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- Technical skills to:
 - use and maintain relevant tools and equipment
 - safely operate and maintain a chainsaw
 - assess, plan and carry out tree-felling operations appropriate to site conditions
- Communication skills to:
 - use appropriate communication and interpersonal techniques and methods with colleagues and others
 - use hand signals with other operators to maintain effective and safe tree felling
- Literacy skills to:
 - locate and report information
 - interpret, apply and convey information in written, diagrammatic and/or verbal form
- Numeracy skills to:
 - estimate tree height
 - calculate product mass and determine tree fall zone
 - measure tree length and diameter
- Problem-solving skills to:
 - review and identify work requirements

- recognise own limitations in conditions and trees for felling
- identify problems and equipment faults and demonstrate appropriate response procedures
- apply safe work practices, including using personal protective equipment (PPE) and controlling hazards
- comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for felling trees manually
- Planning and organising skills to work to site requirements and extraction methods

Required knowledge:

- Basic knowledge of applicable federal, state or territory legislation, regulations, standards and codes of practice relevant to the full range of processes for felling trees manually
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for harvesting trees manually
- Types of tools and equipment for harvesting trees manually, and the procedures for their safe use, operation and maintenance
- Problem identification and resolution strategies and common fault-finding techniques
- Established communication channels and protocols
- Identification and evaluation of structural defects in trees
- Types and purposes of a range of cuts to fell trees
- Operational principles and limitations of a chainsaw
- Procedures for recording and reporting workplace information
- Site production requirements
- Fire protocols

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can assess, plan and safely and efficiently operate chainsaw equipment to manually harvest trees at the intermediate level in a forest environment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- compliance with applicable federal, state or territory legislative and regulatory requirements and codes of practice including OHS, environmental and organisational policies and procedures relevant to harvesting trees at an intermediate level
- compliance with licensing or certification requirements relevant to harvesting trees at an intermediate level
- communicating and working safely with others in the work area
- assessing, planning and safely felling trees without damage to personnel, equipment and surrounding environment
- planning felling sequence and preparing surroundings for harvesting operations
- preparing, operating and maintaining chainsaw equipment and other felling equipment
- applying appropriate extraction methods
- applying specifications as outlined in harvesting plan

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or a realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory requirements and Australian standards

The following resources should be made available:

- workplace location or simulated workplace
- materials and equipment relevant to undertaking work applicable to this units
- work instructions specific to tree felling

Method of assessment

- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access, interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below.

OHS requirements:

- are to be in accordance with applicable federal, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
 - PPE and clothing
 - safety equipment
 - first aid equipment
 - firefighting equipment
 - hazard and risk control
 - fatigue management
 - appropriate signage
 - elimination of hazardous materials and substances

- safe forest practices, including required actions relating to forest fire
- techniques for manual handling, including shifting, lifting and carrying

- Legislative requirements:**
- are to be in accordance with applicable federal, state or territory legislation, regulations, certification requirements and codes of practice and may include:
 - award and organisational agreements
 - industrial relations
 - Australian standards
 - confidentiality and privacy
 - OHS
 - the environment
 - native vegetation
 - equal employment opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care

Organisational requirements may include:

- legal compliance documentation
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements, including waste disposal, recycling and re-use guidelines

Trees typical to the scope of this unit may include the following characteristics:

- lean and weight distribution that can be assessed and readily adapted to falling direction with the use of wedges and/or control with hinge-wood
- various dimensions relative to local forest size distribution
- limited visible damage and/or defect
- species prone to free splitting and adverse reactions

during felling

- a crown that contains dead or broken material, entanglement or malformation and is visible for assessment and monitoring
- single or multi-stems
- diameter of tree greater than chainsaw bar length
- grown on terrain and slope that can add complexity to the operation

Environmental protection measures may include action to limit the impact to:

- native vegetation
- soil and water
- heritage and archeological artefacts
- flora and fauna
- geomorphologic features
- landscape
- external site pollution
- recreational opportunities
- regeneration opportunities

Harvesting plan:

- is a formal document that outlines the operational requirements of the work site, which may include:
 - extraction plan
 - traffic plan
 - environmental requirements
 - restricted areas
 - identified hazards
 - harvesting prescription
 - product volumes
- while site plan document may be named differently between jurisdictions and regions, its common terms may include:
 - coupe plan
 - forest practices plan
 - site or logging plan

Job requirements may include:

- information and instructions relevant to tree-felling operations, including:
 - processing location details
 - trees to be felled and retained
 - general environmental requirements
 - site plan and environmental features

Appropriate personnel
may include:

- supervisors
- clients
- colleagues
- managers

Log extraction methods
may include:

- skidding
- forwarding
- using cable
- shovel logging

Requirements for product quality may include:

- product specifications
- stump shatter
- butt splitting
- log breakage
- stump height

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening and questioning to clarify and confirm understanding
- electronic communication devices

Environmental conditions
may relate to:

- ground growth
- canopy
- general forest lean
- ground slope
- ground hazards
- wind speed and direction

Hazards may include:

- uneven and unstable terrain
- unsafe trees
- fires
- overhead and underground services
- excavations
- traffic
- structures
- hazardous materials
- insects and animals

- other personnel and machinery

Trees considered outside own skill level include:

- trees that contain hazards and are deemed unsafe
- trees that are considered to be in the advanced category
- trees where cuts made may lead to loss of control of tree in felling

Tools and equipment may include:

- warning signs
- chainsaw and components
- PPE and clothing
- first aid equipment
- maintenance requirements
- support tools

Cutting techniques:

- will include:
 - scarf cutting
 - back cutting to provide hinge-wood and maintain control of tree
- and may include:
 - use of wedges to assist in controlling falling direction

Unit Sector(s)

Harvesting and Haulage

Competency field

Competency Field n/a

FPIHAR3221 Harvest trees manually (advanced)

Modification History

Version	Detail
1	Unit replaces FPIHAR3212A Harvest trees manually (advanced)

Unit Descriptor

This unit specifies the outcomes required to assess, plan and safely carry out advanced tree harvesting operations using a chainsaw.

Application of the Unit

This unit involves harvesting trees in forest and forest product operations of all sizes. It applies to a forest environment and involves application of skills and knowledge at a tradesperson level.

These skills and knowledge are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions.

Pre-Requisites

Not applicable

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for felling

- 1.1 Identify and comply with applicable ***occupational health and safety*** (OHS), environmental, ***legislative*** and ***organisational requirements*** relevant to harvesting ***trees***
- 1.2 Identify and adhere to site ***environmental protection measures*** and harvest plan according to relevant legislation and regulations
- 1.3 Review and check ***job requirements*** with ***appropriate personnel***
- 1.4 Select ***tools and equipment*** appropriate to work requirements and check for operational effectiveness according to manufacturer recommendations
- 1.5 Sharpen and adjust chainsaw or change components according to manufacturer recommendations
- 1.6 Assess tree and determine felling requirements
- 1.7 Identify and control potential and existing risks and ***hazards*** in the work area
- 1.8 Identify trees to be felled and ***retained*** and establish general falling direction
- 1.9 Identify ***log extraction method*** and requirements
- 1.10 Determine ***requirements for product quality***

2. Assess conditions and surroundings

- 2.1 Identify and comply with site environmental concerns according to relevant federal, state or territory legislation and local regulations
- 2.2 Identify and assess ***environmental conditions*** according to ***harvesting plan***
- 2.3 Maintain awareness of environmental conditions and other personnel activity in the work area and modify

ELEMENT	PERFORMANCE CRITERIA
	<ul style="list-style-type: none"> 3.4 Assess general factors affecting felling requirements and detect and control specific forest or site risks and hazards
3. Assess tree and plan felling	<ul style="list-style-type: none"> 3.1 Locate and visually assess tree for felling characteristics 3.2 Assess and check required falling direction and possible deviation 3.3 Plan sequence of cuts to fell tree according to standard felling procedures and log quality requirements 3.4 Assess <i>limitations</i> of own skills in safely felling trees, identify <i>trees considered outside own skill level</i> and seek assistance from appropriate personnel where required 3.5 Note and monitor location and activity of other personnel in the work area
4. Fell trees of any size, species and condition	<ul style="list-style-type: none"> 4.1 Fell individual trees using planned <i>cutting techniques</i> according to site conditions, extraction method and at a safe distance from other personnel in the work area 4.2 Adjust cutting technique in response to movement and condition of tree 4.3 Use planned escape route when tree starts to fall and monitor the fall and movement of tree on ground until determined stable 4.4 Delay movement back into the felling area until all tree material, including from adjacent tree crowns, has fallen, and identify any dangerous tree branches that hang-up 4.5 Fell trees to meet production levels, log extraction methods and site requirements 4.6 Identify procedures for removal of trees that are hung-up
5. Maintain equipment	<ul style="list-style-type: none"> 5.1 Detect, rectify and report blunt or damaged saw chain according to workplace procedures 5.2 Monitor chainsaw for operational effectiveness and record and report faults, malfunctions and problems according to workplace procedures

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- Technical skills to:
 - use and maintain relevant tools and equipment
 - safely operate and maintain a chainsaw
 - assess, plan and carry out tree-felling operations appropriate to site conditions
- Communication skills to:
 - use appropriate communication and interpersonal techniques and methods with colleagues and others
 - use hand signals with other operators to maintain effective and safe tree felling
- Literacy skills to:
 - locate and report information
 - interpret, apply and convey information in written, diagrammatic and/or verbal form
- Numeracy skills to:
 - estimate tree height
 - calculate product mass and determine tree fall zone
 - measure tree length and diameter
- Problem-solving skills to:
 - review and identify work requirements
 - recognise own limitations in conditions and trees for felling
 - identify problems and equipment faults and demonstrate appropriate response procedures
 - apply safe work practices, including using personal protective equipment (PPE) and controlling hazards
 - comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for felling trees manually
- Planning and organising skills to work to site requirements and extraction methods

Required knowledge:

- Basic knowledge of applicable federal, state or territory legislation, regulations, standards and codes of practice relevant to the full range of processes for felling trees manually
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for harvesting trees manually
- Types of tools and equipment for harvesting trees manually, and the procedures for their safe use, operation and maintenance
- Problem identification and resolution strategies and common fault-finding

techniques

- Established communication channels and protocols
- Procedures for identifying and evaluating structural defects in trees
- Types and purposes of a range of cuts to fell trees
- Operational principles and limitations of a chainsaw
- Procedures for recording and reporting workplace information
- Chainsaw product specifications
- Site production requirements
- Fire protocols

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can assess, plan and safely and efficiently operate chainsaw equipment to manually harvest trees at an advanced level in a forest environment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- compliance with applicable federal, state or territory legislative and regulatory requirements and codes of practice including OHS, environmental and organisational policies and procedures relevant to harvesting trees at an advanced level
- compliance with applicable licensing or certification requirements relevant to harvesting trees at an advanced level
- effective communication and working safely with others in the work area
- assessing, planning and safely felling trees without damage to personnel, equipment and surrounding environment
- planning felling sequence and preparing surroundings for harvesting operations
- preparing, operating and maintaining chainsaw and other ancillary equipment

- appropriate extraction methods
 - applying specifications as outlined in harvesting plan
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to comply with relevant regulatory requirements and Australian standards
 - The following resources should be made available:
 - workplace location
 - materials and equipment relevant to undertaking work applicable to this unit
 - work instructions specific to tree felling
- Method of assessment**
- Assessment methods must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
 - Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access, interpret and apply the essential underpinning knowledge
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
 - Where the participant has a disability, reasonable adjustment may be applied during assessment
 - Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in accordance with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- appropriate signage
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements: are to be in accordance with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- native vegetation
- equal opportunity

- anti-discrimination
- relevant industry codes of practice
- duty of care
- heritage and traditional land owner issues

Organisational

requirements may include:

- legal compliance documentation
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Trees typical to the scope of this unit may include the following characteristics:

- lean and weight distribution which adds significant complexity yet can be assessed and adapted to site requirements
- larger dimensions relative to local forest size distribution
- substantial lean
- damage and/or defect that requires complex felling techniques
- these may include multi legged, hollow butts, culls, stags
- species prone to free splitting and adverse reactions during falling
- a crown that contains dead or broken material, entanglement or malformation and presents a hazardous and difficult situation for assessment, monitoring and safe falling
- single or complex multi stems
- diameter of tree greater than chainsaw bar length
- grown on terrain and slope that can add significant complexity to the operation

- Environmental protection measures** may include action to limit the impact to:
- native vegetation
 - soil and water
 - heritage and archaeological artefacts
 - flora and fauna
 - geomorphologic features
 - landscape
 - external site pollution
 - recreational opportunities
 - regeneration opportunities
- Job requirements** may include
- information and instructions relevant to tree falling operations including processing location details and trees to be felled and retained
 - information may also include general environmental requirements
 - site plan and environmental features
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - managers
- Tools and equipment** may include
- warning signs
 - chainsaw and components
 - PPE and clothing
 - first aid equipment
 - maintenance requirements
 - support tools
- Hazards** may include:
- uneven/unstable terrain
 - unsafe trees
 - fires
 - overhead and underground services
 - excavations
 - traffic
 - structures
 - hazardous materials
 - insects and animals
 - other personnel and machinery

- Retained** trees include:
- those listed as heritage trees such as seed trees, habitat trees and crop trees
- Log extraction methods** may include:
- skidding
 - forwarding
 - cable
 - shovel logging
- Requirements for product quality** may include:
- product specifications
 - stump shatter
 - butt splitting
 - log breakage
 - stump height
- Communication** may include:
- verbal and non-verbal language
 - hand or other agreed signals
 - eye contact with other operators or personnel
 - active listening and questioning to clarify and confirm understanding
 - use of electronic communication devices
- Environmental conditions** may relate to:
- ground growth
 - canopy
 - general forest lean
 - ground slope
 - ground hazards
 - wind speed and direction
- Harvesting plan** is a formal document that outlines the operational requirements of the worksite which may include:
- extraction plan
 - traffic plan
 - environmental requirements
 - restricted areas
 - identified hazards
 - harvesting prescription
 - product volumes

the harvesting plan document may be named differently between jurisdictions and/or regions, common terms may include but are not restricted to:

- coupe plan
- forest practices plan
- harvesting or logging plan

Limitations may relate to:

- job role and responsibilities
- own competency level
- industry requirements
- own understanding of risk identification processes
- own interpretation of legislation regulations and procedures
- complying with OHS requirements

Trees considered outside own skill level include:

- trees which contain hazards and are deemed unsafe
- trees where cuts made may lead to loss of control of tree in felling

Cutting Techniques will include:

- scarf-cutting
- back cutting to provide hinge-wood and maintain control of tree

and may include:

- use of wedges to assist in controlling falling direction

Unit Sector(s)

Harvesting and Haulage

Competency field

Competency Field

Harvesting and Haulage

FPIHAR4201B Apply tree jacking techniques

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to apply tree jacking techniques in the process of felling trees 180° away from their natural direction of fall using purpose built tree jacks

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIHAR4201A Apply tree jacking techniques

Application of the Unit

Application of the unit

The unit involves applying tree jacking techniques in a forest or farm forest setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for <i>tree jacking</i>	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to applying tree jacking techniques are identified and followed</p> <p>1.2. <i>Work plan</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>trees</i> to be tree jacked are identified and assessed for safe working conditions and <i>environmental protection measures</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Tree jacking activities are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Assess and plan tree jacking	<p>2.1. <i>Environmental conditions</i> are assessed and the outcomes are used as the basis to plan the felling of each tree</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2.Movement and whereabouts of other personnel is monitored and work modified to be in line with OHS regulations</p> <p>2.3.Tree, location and <i>stability</i> are assessed for conditions likely to affect safety of tree jacking activities</p> <p>2.4.Tree is visually assessed for <i>defects, grade</i> and recovery status</p> <p>2.5.Growth around tree and appropriate escape route are selected and cleared either manually or mechanically</p> <p>2.6.<i>Fall direction</i> and allowable degree of error are assessed, considering <i>hang ups</i>, damage, <i>extraction</i> constraints and available open space</p> <p>2.7.<i>Cutting sequence</i> is planned to control direction of the fall and minimise damage to the tree and surrounding environment and communicated to other personnel</p> <p>2.8.Trees too dangerous to be felled safely are marked and referred to appropriate personnel</p>
3. Tree jack trees	<p>3.1.<i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>3.2.<i>Leaders</i> are removed and cleared in line with the tree jacking plan</p> <p>3.3.Unexpected characteristics of a tree are diagnosed and planning is reviewed</p> <p>3.4.Jacking slots are made to provide for placement of tree jacks in line with planned falling direction</p> <p>3.5.Cutting technique is adjusted and tree jacks are used to control movement and direction of tree being felled</p> <p>3.6.Falling is completed once initiated and planned safe exit route used in line with OHS requirements</p> <p>3.7.Movement of the tree on the ground is monitored and trees that hang up are assessed and cleared in line with site requirements</p> <p>3.8.Tree jacking process and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>
4. Conduct operator maintenance	<p>4.1.Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>4.2.<i>Chain</i> is checked for blunt or damaged condition</p> <p>4.3.Chain and other components are removed, sharpened, maintained, adjusted and replaced in line</p>

ELEMENT**PERFORMANCE CRITERIA**

- with manufacturer's recommendations
- 4.4. Tree jacks are checked for operation and serviced
- 4.5. Chainsaw set-up is assessed and adjusted to suit cutting conditions
- 4.6. Chainsaw is kept in operational condition and checked to ensure it meets relevant standards prior to use

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; advanced tree felling; efficiently and safely apply tree jacking techniques; accurately assess chainsaw chain and tree jacks condition
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and maintain information relating to tree jacking
- Numeracy skills sufficient to estimate and measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for applying tree jacking techniques
- Environmental protection requirements, including the safe disposal of waste material, the cleaning of plant, tools and equipment and the recycling and re-use of timber with defects
- Characteristics of trees and timber defects
- Organisational and site standards, requirements, policies and procedures for applying tree jacking techniques
- Tree jacking methods
- Chainsaw operation, cutting sequences and safety
- Established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently apply tree jacking techniques within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to the application of tree jacking techniques
- following organisational policies and procedures relevant to apply tree jacking techniques
- applying tree jacking techniques in line with the work order and within prescribed organisational tolerances
- conducting operator maintenance on a chainsaw
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in

Context of and specific resources for assessment

EVIDENCE GUIDE

an off-site context

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Tree jacked

is the process of felling trees 180° away from their natural lean using purpose built tree jacks, held in position by boring holes into the solid wood of the tree and securing the jacks to these

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment

RANGE STATEMENT

Organisational requirements may include:

- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Work plan is to include:

- instructions for tree jacking for the work site
- and may include:

- type
- size
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- offsider/jack operator
- suppliers
- clients
- colleagues
- managers

Trees

are those in positions where conventional cutting techniques will not facilitate desired fall direction

Environmental protection

- ground growth

RANGE STATEMENT

measures may include:

- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards
- obstacles
- contingencies for modifying operations during wet or other adverse weather conditions

Equipment may include:

- tree jacks
- chainsaws
- specific safety attire
- maintenance tools and equipment

and is to include:

- procedures for chainsaw lock-out such as protecting operators and co-workers from accidental injury by isolating the machine

Communication may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

Environmental conditions may include:

- ground growth
- ground slope
- gullies
- water courses
- seed trees
- habitat trees
- ground hazards
- obstacles

Stability

is the physical stability of the tree in-situ, that it is safe to fell and not likely to contain defect

Defects may include:

- shakes
- insect defects
- knots

RANGE STATEMENT

	<ul style="list-style-type: none"> resin pockets
Grade	is evaluation of the tree for defects, quality and size of log return
Fall direction	is 180° away from natural lean
Hang ups	are trees which become entangled or snagged with other objects, usually other standing trees and do not fall completely to the ground
Extraction	is the method of removing the log from the work site with mechanical equipment and cables, considering site conditions and specific log location
Cutting sequence	is the best direction or angle for making cuts to facilitate achieving the fall direction
Pre start-up checks	are conducted to ensure: <ul style="list-style-type: none"> equipment has been set-up correctly the systems are performing accurately and operating to optimum performance
Leaders	are new tree growth from the base or near the base of the tree
Records and reports may relate to:	<ul style="list-style-type: none"> tree type, size, length, diameter, inspection, grading and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions and may be: <ul style="list-style-type: none"> manual using a computer-based system or other appropriate organisational communication system
Chain	is the fast moving component surrounding the chainsaw blade containing many linked teeth

Unit Sector(s)

Unit sector	No sector assigned
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Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR4202B Coordinate log recovery (hook tender)

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to coordinate operational planning and setting up of cable recovery systems, including supervision and coordination of rigging slingers, yarders, choker setters and chasers

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions.

This unit replaces FPIHAR4202A Coordinate log recovery (hook tender)

Application of the Unit

Application of the unit

The unit involves coordinating log recovery (hook tender) in a forest or farm forest setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for hook tender operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to coordinating log recovery (hook tender) are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>cable recovery equipment</i> are identified and assessed for safe working conditions and <i>environmental protection measures</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Hooker</i> and <i>cable operations</i> activities are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Plan cable system layout	<p>2.1. Information essential to the planning of the cable system layout is obtained, evaluated and the site inspected for factors affecting harvesting operations</p>

ELEMENT**PERFORMANCE CRITERIA**

- and potential hazards
- 2.2. **Landing** location and size, **hauling boundaries**, access routes and construction requirements are provided to construction personnel
- 2.3. Cable system type is selected to provide optimum extraction rate for trees to be felled, considering site **topography** and codes of practice and minimising **system design additions**
- 2.4. General requirements for anchor points, backline and intermediate supports are identified and instructions given to fallers
3. Coordinate **yarder** and cable system set up
- 3.1. Rope sizes are selected for **lines** in line with the code of practice, yarder capacity and system design
- 3.2. **Components** and rigging are selected to meet code of practice requirements and system design
- 3.3. Components and lines are inspected during installation and set up
- 3.4. Site personnel are directed and assisted to layout lines, select **anchors** and position mobile backstops
- 3.5. Felled trees and **extraction sequence** are assessed for size, location and **obstructions** with recovery planned to minimise **line shifts**, log and environmental damage
- 3.6. **Support trees** are selected and directions provided for rigging
- 3.7. Unloaded and loaded system performance is checked and loads calculated to ensure they are within system and equipment capacity
- 3.8. Operations are monitored and procedural or system design changes to improve safety and payload efficiency noted and communicated
4. Coordinate rigging of **spars, towers** and trees
- 4.1. Cable system is checked from plans and operational requirements interpreted for tower, spars and support trees
- 4.2. Spars or support trees to be rigged, necessary **guylines** and required anchor points are checked from the plan or selected within guidelines provided, with trees topped in line with the code of practice
- 4.3. Rigging suitable for operational requirements, loads and rope sizes is selected to meet the code of practice and industry standards
- 4.4. Directions are provided to check components for wear, failure or missing parts prior to rigging, faults

ELEMENT**PERFORMANCE CRITERIA**

- are identified and corrective action is taken
- 4.5. Rigging is coordinated on machine towers to prepare, assemble and fit operational lines in line with system design, prior to raising
- 4.6. ***Climbing and pass line equipment*** is identified to be operated in line with the code of practice
- 4.7. ***Guys*** positioning and rigging within location angle requirements of the code of practice to provide minimal difference in length and tension is coordinated
- 4.8. System components are checked to ensure they meet the code of practice for size, safe working load, layout, position, safety straps, joins, lead angles and operating angles
5. Coordinate line shifts and rigging modifications
- 5.1. Line shifts are anticipated and required rigging is prepared in advance
- 5.2. Limitations of system positioning or design are diagnosed and modifications planned in line with the code of practice
- 5.3. Operations are monitored and procedural changes to improve safety and payload efficiency noted and communicated
- 5.4. New support trees, anchor points and mobile tail anchor position are located and riggers assigned to prepare and rig these in line with system requirements
- 5.5. Breakout processes and equipment faults are ***recorded and reported*** to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely coordinate hook tender operations
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for coordinating log recovery (hook tender)
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for coordinating log recovery (hook tender)
- Cable recovery operations and planning
- Rigging techniques
- Industry standard lengths
- Rigging and yarding operations
- Timber extraction methods
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they safely and efficiently coordinate hook tender operations within

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>organisational requirements</p> <p>The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to coordinating log recovery (hook tender) • following organisational policies and procedures relevant to coordinating log recovery (hook tender) • coordinating hook tender operations in line with the work order and within prescribed organisational tolerances • planning the layout of cable systems in line with site conditions • modifying rigging and coordinating line shifts in line with the hook tender's instructions
Context of and specific resources for assessment	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills

EVIDENCE GUIDE

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment

RANGE STATEMENT

- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use)

RANGE STATEMENT

- guidelines)
- Work order** is to include:
- instructions for coordinating hook tender operations from the work site
- and may include
- type
 - size
 - length
 - quantity
 - grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Cable recovery equipment** may include:
- yarders
 - spars
 - rigging equipment
 - cables
- Environmental protection measures** may include:
- ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards
 - obstacles
 - contingencies for modifying operations during wet or other adverse weather conditions
- Equipment** is to include:
- refer to cable recovery equipment
 - procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine
- Hooker** (hook tender) is the cable logging team leader who decides which method of logging will be the fastest and

RANGE STATEMENT

most efficient, and also designs, plans and coordinates the establishment of cable recovery systems (the higher the hooker can get the logs off the ground means fewer broken logs, hang ups and snags)

Cable operations may include:

- activities covering a full range of species, log sizes, falling and retention densities, slope, other environmental conditions
- the use of cable systems including high lead (no skyline), standing skyline and a running skyline with hauling both uphill and downhill
- logs attached optimising payload without exceeding the lift or haul capacity of the system

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Landing

is the location where the yarder is positioned to receive the logs

Hauling boundaries

are designated forest coupes owned privately, by Government or by the forestry organisation with boundaries which fall within survey pegs for the land allocated for logging

Topography

is a map of the designated area showing terrain levels

System design additions are to include:

- multispans
- blind leads
- bridling
- other techniques potentially reducing extraction efficiency

Yarder

is the crane-like vehicle which winches the timber from the felling site to the landing using a cable

RANGE STATEMENT

	system
Lines are to include:	<ul style="list-style-type: none">• mainlines• haulback lines• skylines• strawlines• extensions• guylines
Components may include:	<ul style="list-style-type: none">• carriages• jacks• butt rigging• chokers• grapples• blocks• sheaves• ropes• shackles• pins• tail rope• straps• intermediate supports
Anchors are to include:	<ul style="list-style-type: none">• anchors• tailholds• block stumps• mobile backstops
Extraction sequence	is the method of removing the log from the work site with mechanical equipment and cables, considering site conditions and specific log location, in a way which minimises downtime and risk of snags, breakage and hang ups
Obstructions may include:	<ul style="list-style-type: none">• standing trees• stumps• rocks• ground projections
Line shifts	are the moving of rigging lines from one area of operation to a new area
Support trees	are trees (with heads removed) which can act as spars and be rigged accordingly
Spars	are out-posted erections which provide elevation

RANGE STATEMENT

for the cables some distance from the yarder tower

Towers

are the crane like raised towers which the cables operate from to provide height for extraction of logs.

Guylines

support the tower or spar and other rigged erections to provide stability and strength during operation

Climbing and pass line equipment

are lines linked to the drum line for the purposes of climbing trees and spars

Guys

- refer to guylines

Records and reports may include:

- cable recovery operations
- extraction methods
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR4203B Design log landings and snig tracks

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to design, plan and establish log landings and snig tracks and to provide support for their construction and development

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIHAR4203B Design log landings and snig tracks

Application of the Unit

Application of the unit

The unit involves designing log landings and snig tracks in a forest or farm forest setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan <i>landing</i> and recovery requirements	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to designing log landings and <i>snig tracks</i> are identified and followed</p> <p>1.2. <i>Logging</i> and <i>topography</i> details are obtained and assessed while applying <i>environmental management considerations</i></p> <p>1.3. Landing location and construction requirements are identified in line with the harvest plan and inspected to assess factors affecting harvesting operations</p> <p>1.4. Timeframe for use of the site and likely weather conditions are identified</p> <p>1.5. Log <i>extraction</i> methods and storage requirements for landings, roads, tracks, equipment placement, falling and recovery rates and delivery schedules are calculated and documented</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Design landing and snig tracks	<p>2.1. Specific landing site, size and level are calculated to meet all requirements, minimise landing</p>

ELEMENT**PERFORMANCE CRITERIA**

- environmental damage* and optimise construction time
- 2.2. Number and location of snig tracks are planned to optimise track clearing and construction time, log handling requirements and minimise environmental damage
- 2.3. Track and road entry points to landing are located in line with plan requirements, log handling procedures, vehicle and equipment access requirements, and turning and loading space requirements
- 2.4. Provision for equipment availability and access for construction are included in landing and track design
- 2.5. **Restoration** of land on completion of activity is planned
- 2.6. Landing design and track locations are documented in line with regulations
3. Coordinate landing and track development
- 3.1. Landing and snig track design and construction plan is clearly communicated to site personnel to enable preparation
- 3.2. Operational procedures for tracks and landings are planned with site personnel in line with the design plan
- 3.3. Construction of landing and tracks is monitored and unexpected ground, water, vegetation or other environmental conditions reviewed and design modified in line with new conditions
- 3.4. Technical assistance is provided to site personnel for the preparation of landing and tracks
- 3.5. Design and development process is **recorded and reported** to the **appropriate personnel**

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and

REQUIRED SKILLS AND KNOWLEDGE

equipment; efficiently and safely design log landings and snig tracks

- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for designing log landings and snig tracks
- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition on completion of activity
- Organisational and site standards, requirements, policies and procedures for designing log landings and snig tracks
- Log extraction methods
- Cable recovery operations and planning
- Landing design and development
- Snig track requirements, design and development
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently design log landings and snig tracks within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to designing log landings and snig tracks
- following organisational policies and procedures relevant to designing log landings and snig tracks
- designing log landings and snig tracks in line with the work order and within prescribed organisational tolerances
- planning the layout of the landing and snig tracks in line with site conditions
- coordinating the development of the landing and snig tracks in line with the hook tender's instructions

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Landing

is the location where the yarder is positioned to receive the timber

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and

RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Snig tracks** are to include:
- equipment access tracks
 - hauling tracks
 - emergency escape routes
 - vehicular tracks
- Logging** may include:
- activities covering a full range of species, log sizes, falling and retention densities, slope, other environmental conditions
 - use of cable systems including high lead (no skyline), standing skyline and a running skyline with hauling both uphill and downhill
 - Logs attached optimising payload without exceeding the lift or haul capacity of the system
- Topography** is a map of the designated area showing terrain levels
- Environmental management considerations** may include:
- ground growth
 - canopy
 - general forest lean
 - wind speed and direction
 - fallen trees
 - density of trees
 - ground slope
 - soil and water protection
 - ground hazards
 - obstacles
- Extraction** is the method of removing the log from the worksite with mechanical equipment and cables, considering site conditions and specific log location, in an order which minimises downtime and risk of snags, breakage and hang ups
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm

RANGE STATEMENT

- Environmental damage** may include:
- understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
 - natural vegetation and landscape
 - temporary, short-term, long-term and permanent
- Restoration** is the provision for placing and storing topsoil in preparation for returning the site to its original or near to original condition
- Records and reports** may include:
- landing and snig track design and development operations
 - extraction methods
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR4204B Plan and coordinate fire salvage operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assess, plan and coordinate salvaging trees of a commercially viable size, immediately after a forest fire, before degradation and insect infestation occur. The unit includes directing tree fellers and trimmers

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIHAR4204A Plan and coordinate fire salvage operations

Application of the Unit

Application of the unit

The unit involves planning and coordinating fire salvage operations in a forest or farm forest setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Prepare for <i>salvage</i> operations | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planning and coordinating fire salvage operations are identified and followed
1.2. Local authority is contacted and salvage approval obtained
1.3. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i>
1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations
1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Plan salvage operations | 2.1. Location including map and grid references are checked, <i>land ownings</i> are obtained and <i>boundaries</i> |

ELEMENT	PERFORMANCE CRITERIA
	established
	2.2. Topography including slope, elevation, contours and soil type are investigated and reported
	2.3. Operational activities including site preparation, environmental considerations and access are planned
	2.4. Environmental protection measures for the landscape, soil and drainage are planned and instigated
	2.5. Extent of damage caused by fire is assessed and reported
	2.6. Estimation of commercial viability of tree harvest and extraction is calculated and reported
	2.7. Clearing, trimming and felling operations are planned and communicated to harvesting personnel
3. Coordinate salvage operations	3.1. Schedule for salvaging is produced, checked and communicated
	3.2. Track builders are directed to form access in line with the salvage schedule and plan
	3.3. Clearing of burnt scrub and dangerous limbs is directed and monitored
	3.4. Movement and whereabouts of personnel is monitored and work modified to be in line with OHS regulations
	3.5. Tree, location and stability are assessed for conditions likely to affect safety of felling activities
	3.6. Fellers are directed to fall designated trees in line with the salvage plan and OHS regulations
	3.7. Use of mechanical equipment is monitored to minimise carbon emissions
	3.8. Logs are hauled from site and landscape is left in a safe and tidy condition to allow regeneration to occur

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; effectively assess salvage operation requirements including fire damage
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and coordinating fire salvage operations
- Environmental protection requirements, including the safe disposal of waste material, the recycling and re-use of timber with defects and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and coordinating fire salvage operations
- Sustainable forest management and the role of fire salvage operations in the recovery of fire damaged forests
- Environmental risks and hazards of fire damaged forests
- Characteristics of trees and timber defects
- Assessment of fire damaged trees
- Fire salvage operations and strategies
- Harvesting and extraction
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and coordinate fire salvage operations within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to planning and coordinating fire salvage operations
- following organisational policies and procedures relevant to planning and coordinating fire salvage operations
- planning and coordinating fire salvage operations in line with community expectations and operational requirements
- coordinating personnel to follow planning, communications and scheduling for fire salvage operations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package

EVIDENCE GUIDE

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Salvage is the process of removing commercially viable

RANGE STATEMENT

trees from a site which has been damaged by fire and includes:

- minimising the impact of mechanical equipment on the environment
- leaving the site in a tidy and environmentally protected state ready for regeneration

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal

Organisational requirements

RANGE STATEMENT

may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for trimming and felling
- despatch of salvaged, felled trees from the work site

and may include:

- type
- size
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers
- local authorities

Equipment may include:

- basic assessment equipment
- computers
- safety attire

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from

RANGE STATEMENT

Communication may include:	accidental injury by isolating the machine
	<ul style="list-style-type: none">• verbal and non-verbal language• constructive feedback• active listening• questioning to clarify and confirm understanding• use of positive, confident and cooperative language• use of language and concepts appropriate to individual social and cultural differences• control of tone of voice• body language
Land ownings	is the process of notifying and obtaining owner approval to commence harvesting operations
Boundaries	are designated forest allotments owned privately, by Government or by the forestry organisation and fall within survey pegs for the land allocated
Topography	is a map of the designated area showing terrain levels, contours, elevations, slopes, gullies and adjoining land parcels
Operational activities may include:	<ul style="list-style-type: none">• coupe map details• site preparation• streamside buffers• filter strips• contours• gullies• crossing points• habitat protection• rainforest protection• flora and fauna protection• landscape protection• soil and water protection• excluded areas• rubbish removal• permanent roads• temporary roads• landings• dumps• snig tracks

RANGE STATEMENT

	<ul style="list-style-type: none"> • forwarding tracks • adjoining land • wet weather restrictions • fire protection requirements
Environmental protection measures may include:	<ul style="list-style-type: none"> • ground growth • canopy • general forest lean • wind speed and direction • fallen trees • density of trees • ground slope • soil and water protection • ground hazards • obstacles • contingencies for modifying operations during wet or other adverse weather conditions
Extent of damage is to include:	<ul style="list-style-type: none"> • impact fire has had on a forest region • how fire has affected the trees • what fire has done to underlying scrub • how safe the forest is to enter
Fire may include:	fires caused by: <ul style="list-style-type: none"> • arson • accident • lightning strike • wildfires
Commercial viability	is the assessment of trees to determine their physical stability and worth as useable logs for further production activities
Harvest and extraction	are the methods of felling and removing felled logs from the work site with mechanical equipment, considering site conditions and specific log location
Schedule	is the plan, timeline and list of events to take place in conducting fire salvage operations
Stability	is the assessment of a tree to determine if it is safe to fall, based on how badly affected by fire damage it is

RANGE STATEMENT

Regeneration is the return of an area to a revegetated state, protecting its landscape, soil and drainage

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR4205B Implement harvesting plans

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to implement harvesting plans for established coupes to maximise output and cost efficiencies

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIHAR4205B Implement harvesting plans

Application of the Unit

Application of the unit The unit involves implementing harvesting plans in a forest or farm forest setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan <i>coupe</i> harvesting	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to implementing harvesting plans are identified and followed</p> <p>1.2. Size of coupe and available timber is calculated</p> <p>1.3. Human resource requirements, <i>equipment</i> and resource requirements are estimated</p> <p>1.4. Personnel plans and schedules are drawn up and employees notified of coupe harvesting date and location</p> <p>1.5. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.6. <i>Planning permits</i> are applied for</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Implement harvesting plans	<p>2.1. Forest type, available <i>species</i> and <i>topography</i> are analysed and documented in line with plan and site procedures</p>

ELEMENT	PERFORMANCE CRITERIA
	2.2. <i>Gross area</i> of coupe is calculated and <i>nett area</i> to be <i>harvested</i> established
	2.3. <i>Volume</i> estimates are calculated and reported
	2.4. <i>Operational activities</i> including site preparation, environmental considerations and access are planned
	2.5. Harvesting and <i>cartage</i> contracts are let for tender and issued and cartage routes set
	2.6. Schedule for harvesting is produced, checked and communicated
3. Review harvesting plan	3.1. Problems encountered during harvesting are assessed and processes planned for improvement
	3.2. Personnel and equipment efficiencies are reviewed and improvements planned for implementation
	3.3. Environmental issues encountered during harvesting are documented and fed into future planning processes
	3.4. Harvesting plan and methods are assessed and improvements devised
	3.5. Harvesting plan implementation issues are <i>recorded and reported</i> to appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; effectively coordinate harvesting and cartage contracts
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to accurately calculate gross and nett areas
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for implementing harvesting plans

- Environmental protection requirements, including the safe disposal of waste material the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for implementing harvesting plans
- Environmental risks and hazards specific to coupes
- Coupe establishment and harvesting planning
- Harvesting methodologies
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they safely and efficiently implement harvesting plans within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to implementing harvesting plans
- following organisational policies and procedures relevant to implementing harvesting plans

EVIDENCE GUIDE

- implementing harvesting plans in line with regulations and organisational requirements
 - implementing harvesting plans in line with site conditions, regulations and organisational requirements
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate

EVIDENCE GUIDE

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Coupe

is a large plot or stand of timber in a designated area which is planned for harvesting

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements

- legislation
- organisational policies and procedures

RANGE STATEMENT

may include:

- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Equipment may include:

- standard harvesting equipment
- equipment required for a specific harvesting activity

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine

Planning permits

are permits granted by local authorities for forest growing and harvesting operations to take place

RANGE STATEMENT

based on approved plans submitted to local government following all required regulations

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Species may include:

- native species of one or more type
- imported species

Topography

is a map of the designated area showing terrain levels, contours, elevations, slopes, gullies and adjoining land parcels, rainfall, soil type

Gross area

is the total area mass of the planned forest coupe

Nett area

is the total area of forest available for harvesting excluding streamside buffers, filter strips, habitat protection areas, rainforest protection, excluded areas, roads, tracks and landings

Harvested

is the method of cutting and extracting trees and logs from designated areas

Volume

is the estimated return of cubic metres or tonnes of timber for each of sawlogs, pulpwood or firewood

Operational activities may include:

- coupe map details
- site preparation
- streamside buffers
- filter strips
- contours
- gullies
- crossing points
- habitat protection
- rainforest protection
- flora and fauna protection

RANGE STATEMENT

- landscape protection
- soil and water protection
- excluded areas
- rubbish removal
- permanent roads
- temporary roads
- landings
- dumps
- snig tracks
- forwarding tracks
- adjoining land
- wet weather restrictions
- fire protection requirements

Cartage

is the use of log truck hauling operators to remove felled logs from the site

Records and reports may include:

- producing detailed records and reports outlining the implementation of harvesting plans and the review processes

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPIHAR5201B Design harvesting plans

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to design harvesting plans for established coupes to maximise output and cost efficiencies across multiple coupes in a number of locations

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIHAR5201A Design harvesting plans

Application of the Unit

Application of the unit The unit involves designing harvesting plans in a forest or farm forest setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for coupe harvest design	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to designing harvesting plans are identified and followed</p> <p>1.2. <i>Local authority</i> coverage, <i>land ownings</i> are obtained and <i>boundaries</i> are established</p> <p>1.3. Coupe locations including map and grid references are identified</p> <p>1.4. Land use <i>zonings</i> are identified or applied for</p> <p>1.5. Documented environmental issues encountered with previous harvesting plans are analysed and taken into consideration</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Design harvesting plans	<p>2.1. Forest types, available <i>species</i> and <i>topography</i> are analysed and documented in line with plan and site procedures</p> <p>2.2. <i>Gross area</i> of each coupe is calculated and <i>nett area</i> to be <i>harvested</i> devised</p> <p>2.3. <i>Volume</i> estimates are calculated and reported for</p>

ELEMENT	PERFORMANCE CRITERIA
3. Review harvesting plan design	<p>each coupe</p> <p>2.4. <i>Operational activities</i> including site preparation environmental considerations and access are designed</p> <p>2.5. Harvesting and <i>cartage</i> requirements are analysed and calculated</p> <p>2.6. Schedule for harvesting is designed, checked and communicated</p> <p>3.1. Harvesting plan designs are reviewed with other harvest plan designers</p> <p>3.2. Harvesting plan designs are tested and modified to suit each coupe</p> <p>3.3. Harvesting plan design is <i>recorded and reported</i> to appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to accurately calculate gross and nett coupe areas
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for designing harvesting plans
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for designing harvesting plans

REQUIRED SKILLS AND KNOWLEDGE

- Environmental risks and hazards specific to coupes
- Harvesting planning design principles
- Harvesting methodologies
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently design harvesting plans within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to designing harvesting plans
- following organisational policies and procedures relevant to designing harvesting plans
- designing harvesting plans in line with regulations and organisational requirements
- designing harvesting plans in line with site conditions, regulations and organisational requirements

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

<p>Organisational requirements may include:</p>	<ul style="list-style-type: none"> • Australian Standards • confidentiality and privacy • OHS • the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care • legal • organisational and site guidelines • policies and procedures relating to own role and responsibility • quality assurance • procedural manuals • quality and continuous improvement processes and standards • OHS, emergency and evacuation procedures • ethical standards • recording and reporting requirements • equipment use and maintenance and storage requirements • environmental management requirements (waste disposal, recycling and re-use guidelines)
<p>Local authorities are to include:</p>	<p>local government councils or shires with local planning and zoning authority for a given region</p>
<p>Land ownings</p>	<p>the process of notifying and obtaining owner approval to commence harvesting operations</p>
<p>Boundaries</p>	<p>are designated forest allotments owned privately, by Government or by the forestry organisation that fall within survey pegs for the land allocated</p>
<p>Zoning</p>	<p>is designated forest coupes owned privately, by government or by the forestry organisation with boundaries that fall within survey pegs for the land allocated for forest growing and harvesting operations under local authority allocation</p>
<p>Communication may include:</p>	<ul style="list-style-type: none"> • verbal and non-verbal language • constructive feedback • active listening

RANGE STATEMENT

- questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Species may include:**
- native species of one or more type
 - imported species
- Topography** is a map of the designated area showing terrain levels, contours, elevations, slopes, gullies and adjoining land parcels, rainfall, soil type
- Gross area** is the total area mass of the planned forest coupe
- Nett area** is the total area of forest available for harvesting excluding streamside buffers, filter strips, habitat protection areas, rainforest protection, excluded areas, roads, tracks and landings
- Harvested** is the method of cutting and extracting trees and logs from designated areas
- Volume** is the estimated return of cubic metres or tonnes of timber for each of sawlogs, pulpwood or firewood
- Operational activities may include:**
- coupe map details
 - site preparation
 - streamside buffers
 - filter strips
 - contours
 - gullies
 - crossing points
 - habitat protection
 - rainforest protection
 - flora and fauna protection
 - landscape protection
 - soil and water protection
 - excluded areas
 - rubbish removal
 - permanent roads

RANGE STATEMENT

- temporary roads
- landings
- dumps
- snig tracks
- forwarding tracks
- adjoining land
- wet weather restrictions
- fire protection requirements

Cartage

is the use of log truck hauling operators to remove felled logs from the site

Records and reports may include

- producing detailed records and reports outlining the design of harvesting plans and the review processes

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Harvesting and Haulage

FPISAW2201B Grade round poles and debarked logs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to visually evaluate pole and log characteristics and defects for classification into varying strength and appearance grades. It includes sorting poles and logs into classifications, marking material in line with grade and on-site distribution.

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIS2001A Grade round poles and debarked logs

Application of the Unit

Application of the unit

The unit involves grading round poles and debarked logs in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Prepare for grading, sorting and marking | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to grading round poles and debarked logs are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of poles and debarked logs to be graded, sorted and marked is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Grading, sorting and marking process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and</p> |
|---|--|

ELEMENT	PERFORMANCE CRITERIA
2. Grade, sort and mark poles and debarked logs	<p data-bbox="624 293 1161 329">maintained in line with OHS requirements</p> <p data-bbox="579 344 1278 421">2.1.Pole and debarked log requirements for storage or subsequent processing operations are selected</p> <p data-bbox="579 427 1299 504">2.2.<i>Size</i> of poles or logs is visually assessed in line with industry standards and number of <i>ranges</i> estimated</p> <p data-bbox="579 510 1310 620">2.3.Material characteristics and <i>defects</i> of each pole or log are evaluated against industry standards for grade type</p> <p data-bbox="579 627 1315 663">2.4.<i>Moisture content</i> is measured, recorded and reported</p> <p data-bbox="579 672 1286 748">2.5.Defects are clearly marked for docking in line with site requirements</p> <p data-bbox="579 754 1294 864">2.6.Material is marked and sorted, in line with its grade classification, with markers or stickers which are clearly interpretable</p> <p data-bbox="579 871 1254 981">2.7.Grading outcomes and distribution problems are <i>recorded and reported</i> in line with workplace procedures</p>
3. Distribute material	<p data-bbox="579 1001 1246 1111">3.1.Poles or logs are directed and moved to planned storage or processing operations in line with site requirements</p> <p data-bbox="579 1117 1299 1227">3.2.Sub-standard material is rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p data-bbox="579 1234 1230 1310">3.3.<i>On-site movement of material</i> is monitored to ensure intended flow is achieved</p> <p data-bbox="579 1317 1214 1386">3.4.Storage locations are labelled in line with site systems</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; and to efficiently and safely grade, sort and mark poles and debarked logs
- Communication skills and interpersonal techniques sufficient to interact

REQUIRED SKILLS AND KNOWLEDGE

appropriately with colleagues and others in the workplace

- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for grading round poles and debarked logs
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for grading round poles and debarked logs
- Environmental risks and hazards
- Methods of visual estimation, grading, colour identification and tagging
- Sorting, marking and distribution processes
- Industry standard diameters and lengths
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must

EVIDENCE GUIDE

be able to provide evidence that they can safely grade, sort and mark poles or debarked logs in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to grading round poles and debarked logs
- following organisational policies and procedures relevant to grading round poles and debarked logs
- grading, sorting and marking a full range of poles or debarked logs in readiness for storage and/or processing
- distributing poles or debarked logs on site using designated equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills

EVIDENCE GUIDE

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment

RANGE STATEMENT

- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements

RANGE STATEMENT

- (waste minimisation and disposal, recycling and re-use guidelines)
- Poles and debarked logs** may include:
- hardwood or softwood
 - poles left in the round
 - with or without preservative treatment
 - logs destined for conversion to boards
- Work order** is to include:
- instructions for receipt/despatch and grading
 - sorting and marking of poles or debarked logs to/from the designated storage location or processing
- and may include:
- type
 - size
 - quantity
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Storage locations** may include:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight

RANGE STATEMENT

- grade
 - shelf life
 - stock rotation position
- Equipment** may include:
- measuring equipment
 - moisture meters
 - lifting equipment for the movement of poles or logs
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Size** is to include:
- largest through to smallest diameters of poles and debarked timber within industry or site standards
 - longest through to shortest lengths of poles and debarked logs within industry or site standards
- Range** is the number of classifications/grades poles or logs are sorted into based on diameter or length
- Defects** may include:
- warp
 - wane
 - curvature
 - shakes
 - insect defects
 - knots
 - resin pockets
- Moisture content**
- is the amount of moisture maintained in poles or debarked logs after kiln drying to avoid cracking and deforming
 - in Australia generally ranges between 10% in warmer, more humid climates to 14% in cooler climates
- Records and reports** may
- product type
 - size

RANGE STATEMENT

include:

- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

On-site movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment

lifting equipment such as:

- fork lifts
- slings
- lifting/moving frames
- trolley jacks
- gantry cranes
- dozers
- loaders

assistance with lifting such as:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW2202B Sort boards manually

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to conduct manual sorting operations to process and store boards of varying sizes

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2202A Sort boards manually

Application of the Unit

Application of the unit

The unit involves sorting boards manually in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------|---|
| 1. Prepare for sorting | <ul style="list-style-type: none"> 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to sorting boards manually are identified and followed 1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> 1.3. Type and quantity of <i>boards</i> to be <i>sorted</i> are assessed and acquired from the <i>storage location</i> 1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Sorting process is planned in line with site procedures 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Sort boards | <ul style="list-style-type: none"> 2.1. Board cross-sections, lengths and <i>grades</i> to be sorted are identified 2.2. Board sizes are allocated to storage bins or trays 2.3. Sorting process is conducted regularly, checking operation of conveyors and bins to ensure supply of |

ELEMENT**PERFORMANCE CRITERIA**

- boards to downstream processing
- 2.4. Board characteristics and *features* are *visually assessed* and sub-standard boards rejected and *disposed of* in line with site procedures and environmental requirements or marked for docking
- 2.5. Flow of material is maintained and boards are directed to subsequent operations in line with size and grade
- 2.6. Sorting is checked to ensure board sizes are consistent with visual assessment
- 2.7. Sorting process and equipment faults are *recorded and reported* to the appropriate personnel
3. Distribute material
- 3.1. Boards are directed and moved to planned storage or processing operations in line with site requirements
- 3.2. Sub-standard material is rejected and disposed of in line with site requirements
- 3.3. *On-site movement of material* is monitored to ensure intended flow is achieved
- 3.4. Storage locations are labelled in line with site systems

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely sort boards manually
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sorting boards manually
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sorting boards manually
- Environmental risks and hazards
- Sorting techniques and procedures
- Grading markings and quality standards
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely sort boards manually in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to sorting boards manually
- following organisational policies and procedures

EVIDENCE GUIDE

Context of and specific resources for assessment

relevant to sorting boards manually

- conducting manual sorting in readiness for allocation of boards to storage or downstream operations
- using transfer sorting equipment to distribute boards
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the manual sorting of timber

and may include:

- type
- width
- length
- thickness
- quantity

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

RANGE STATEMENT

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Boards may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber

Sorting

is the process of classifying timber into lots consisting of the same size and grade, dependent on length, width, thickness and quality of board

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment is to include:

- conveyors and transfer equipment
- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback

RANGE STATEMENT

- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Grading

is the process of:

- visually evaluating material characteristics and features for classification into varying strength and appearance grades
- inspecting timber to classify quality of individual boards

Features may include:

- incorrect moisture content
- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Visual assessment is to include:

- the inspection of timber to determine finish quality and faults

Disposing of may include:

- recycling sub-standard boards/material
- re-using sub-standard boards/material

Records and reports may include:

- sorting requirements
- product type
- size
- inspection
- grading and marking outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other

RANGE STATEMENT

appropriate organisational communication system

On-site movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment

lifting equipment such as:

- fork lifts
- slings
- trolley jacks
- gantry cranes
- loaders

assistance with lifting such as:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW2203B Sort boards mechanically

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to set up, operate and maintain a mechanical sorting machine to process boards of varying sizes

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2203A Sort boards mechanically

Application of the Unit

Application of the unit

The unit involves sorting boards mechanically in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for sorting	1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to sorting boards mechanically are identified and followed 1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> 1.3. Type and quantity of <i>boards</i> to be sorted are assessed and acquired from the <i>storage location</i> 1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Sorting process is planned in line with site procedures 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements
2. Sort boards	2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements 2.2. Board cross-sections, lengths and <i>grades</i> to be sorted are identified, <i>size discriminations</i> set and timber

ELEMENT**PERFORMANCE CRITERIA**

- flow to the machine planned
- 2.3. **Program** linking board sizes to storage bins or trays is selected, entered and adjusted to optimise storage space and ensure an efficient operation
- 2.4. Sorting process is conducted automatically and correct operation of the machine, gates, conveyors and bins checked
- 2.5. Flow of material is maintained and boards are directed to subsequent operations in line with size and grade
- 2.6. Machine performance is monitored to ensure board sizes are consistent with machine settings and **visual inspection**
- 2.7. Boards rejected during the automatic sorting process or visual inspection are **disposed of** in line with site procedures and environmental requirements
- 2.8. Sorting process and equipment faults are **recorded and reported** to the appropriate personnel
3. Conduct operator maintenance
- 3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 3.2. **Photo electric cells and reflectors** or other switching systems are regularly cleaned and checked
- 3.3. Sorting machine size identification mechanisms are checked, maintained and cleaned
- 3.4. Sorting area is kept clear of dust, off-cuts and debris in line with OHS requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate sorting equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to

REQUIRED SKILLS AND KNOWLEDGE

complete a task

- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sorting boards mechanically
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sorting boards mechanically
- Environmental risks and hazards
- Sorting procedures and mechanical sorting techniques
- Grading markings and quality standards
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely operate mechanical sorting equipment in line with organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to sorting boards mechanically
- following with organisational policies and procedures relevant to sorting boards mechanically
- operating mechanical sorting equipment in readiness for allocation of timber to storage or downstream operations
- accurately setting mechanical sorting equipment parameters
- conducting operator maintenance on mechanical sorting equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge

EVIDENCE GUIDE

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management

RANGE STATEMENT

Environmental requirements may include:

- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the mechanical sorting of timber

RANGE STATEMENT

and may include:

- type
- width
- length
- thickness
- quantity

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- supervisors
- suppliers
- clients
- colleagues
- managers

Appropriate personnel may include:

Boards may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber

Sorting may include:

- classifying timber into lots consisting of the same size and grade dependent on:
 - length
 - width
 - thickness
 - quality of board
 - or sorting for other production lines or waste

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

RANGE STATEMENT

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position
- mechanical sorting machines

Equipment is to include:

and may include:

- drop sorters
- waterfalls
- unscramblers
- tray sorters

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Grading

is the process of:

- visually evaluating material characteristics and defects for classification into varying strength

RANGE STATEMENT

and appearance grades

- inspecting timber to classify quality of individual boards

Size discrimination

is the settings on the mechanical sorting machine which identify and classify the size of boards, determining their allocation to a size category

Program

is the computer based program which determines sorting of varying sized boards to their allocated storage area

Visual inspection is to include:

the assessment of timber to determine:

- finish quality
- faults
- recycling rejected boards
- re-using rejected boards
- automatic sorting requirements
- product type
- size
- inspection
- grading and marking outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

Disposing of may include:

Records and reports may include:

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Photo electric cells and reflectors are sensory devices which calculate size and tell the computer where to direct the board

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW2204B Dock boards with mechanical feed

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and dock material to length with a power driven saw and the aid of mechanical feed. The unit includes monitoring and adjusting the process and operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2204A Dock boards with mechanical feed

Application of the Unit

Application of the unit

The unit involves docking boards with mechanical feed in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------|---|
| 1. Prepare for docking | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>docking boards</i> with mechanical feed are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Board <i>cutting pattern</i> and <i>saw set-up sequences</i> are planned in line with site procedures</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Dock boards to length | <p>2.1. Boards are marked and stops set in preparation for cutting</p> <p>2.2. Docking sequence is followed to produce the required quantity</p> <p>2.3. Cuts are checked for length and <i>grade</i> within a set <i>tolerance</i></p> |

ELEMENT	PERFORMANCE CRITERIA
	2.4. Boards with <i>features</i> , incorrect cuts and off-cuts are <i>disposed of</i> in line with site procedures and environmental requirements
	2.5. <i>Mechanical feed</i> systems are regularly monitored for material flow problems and blockages cleared
	2.6. Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel
	2.7. Material is safely <i>stacked</i> in a designated location in line with work order requirements
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. Saw and saw blades are checked for blunt or damaged condition in line with site procedures
	3.3. Blunt or damaged saws and saw blades are <i>dealt with</i> in line with site procedures, manufacturer's recommendations and environmental requirements
	3.4. Saw area is kept clear of dust, off-cuts and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely dock boards with mechanical feed; accurately identify blunt or damaged saws and saw blades
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for docking boards with mechanical feed

- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for docking boards with mechanical feed
- Environmental risks and hazards
- Characteristics of timber and timber features
- Cutting patterns and sequences
- Saw blade condition assessment
- Industry standard cross-sections and lengths
- Mechanical feed systems
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely dock boards with mechanical feed within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to docking boards with mechanical feed
 - following organisational policies and procedures relevant to docking boards with mechanical feed
 - docking boards with mechanical feed in line with the work order and within prescribed organisational tolerances
 - conducting operator maintenance on a docking saw
 - stacking batches of cut material in line with organisational requirements and OHS regulations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying

RANGE STATEMENT

Environmental requirements
may include:

- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Docking

is the process of cutting boards to set lengths

Boards may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber

RANGE STATEMENT

Work order is to include:

- preservative treated timber
- instructions for the docking and despatch of timber and timber products from the work site

and may include:

- type
- size
- length
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- measuring equipment
- power operated, manually controlled docking and trimming saws where the cutting angle is controlled relative to the board guides and clamps
- saws with adjustable angle
- saws with one blade
- radial arm saws
- table saws
- bench saws
- saws with automatic feed

and is to include:

- procedures for saw lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Cutting pattern and saw set-up sequences are to be limited to:

- single cuts requiring one cutting pass
- set up of cutting lengths
- number of boards to be cut

Communication may include:

- verbal and non-verbal language
- constructive feedback

RANGE STATEMENT

- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Grading

is the process of:

- visually evaluating material characteristics and features for classification into varying strength and appearance grades
- inspecting timber to classify quality of individual boards

Tolerance

is a set limit for cutting over or under the required length within a set margin of acceptance usually + or - 0.5 mm or in line with order or organisational requirements

Features may include:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling boards with features, incorrect cuts and off-cuts
- re-using boards with features, incorrect cuts and off-cuts

Mechanical feed may include:

- conveyor belt systems

Recorded and reported may include:

- docking requirements
- product type
- size
- inspection
- grading and marking outcomes
- storage locations
- quality outcomes
- hazards

RANGE STATEMENT

- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Stacked may include:

- preparing for transport
- categorising in common size, length and angle
- marking lots in line with work order and site requirements
- locating as not to block access or passage

Dealing with may include:

- repair of damaged saws and blunt or damaged saw blades
- disposing of saws and saw blades that cannot be repaired

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW2205B Assemble materials using nail plates

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and assemble materials with the installation of nail plates in readiness for transport to a construction site

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2205A Assemble materials using nail plates

Application of the Unit

Application of the unit

The unit involves assembling materials using nail plates in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to assembling <i>materials</i> using nail plates are identified and followed</p> <p>1.2. <i>Work order</i> and construction plans are reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> and <i>nail plates</i> to be assembled are collected</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Set-up jigs</i> required for construction are specified and prepared</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Assemble materials	<p>2.1. <i>Timber components</i> are selected from pre-cut material in line with the cutting list and design specifications</p> <p>2.2. Allowable number and position of joints is</p>

ELEMENT**PERFORMANCE CRITERIA**

- interpreted from the construction plan
- 2.3. Components are positioned and clamped in jigs ready for joining with allowable faults, joints and grain in line with construction standards and grading rules
- 2.4. *Defective components* are rejected and *disposed of* in line with site procedures and environmental requirements
- 2.5. Components are stapled to maintain temporary alignment during assembly
3. Install nail plates
- 3.1. Nail plates are located and selected in line with the construction plans and standards
- 3.2. Material and nail plate press are positioned over joints
- 3.3. Nail plates are positioned on joints and installed in line with the construction plan
- 3.4. Sub-standard nail plates and nail plates damaged during the process are *dealt with* in line with site procedures and environmental requirements
- 3.5. *Assembly faults* are corrected in line with site procedures
4. Prepare material for despatch and report outcomes
- 4.1. Finished material is checked and labelled in line with work order
- 4.2. Components are removed from jigs and safely *stacked* in a designated location in line with work order requirements
- 4.3. Finished material is *strapped*, packed and labelled ready for transportation
- 4.4. *Equipment faults* are recognised and reported in line with site procedures
- 4.5. *Records and reports* are accurately completed, processed and maintained in line with workplace procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely assemble materials using nail plates
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assembling materials using nail plates
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for assembling materials using nail plates
- Environmental risks and hazards
- Characteristics of timber and timber defects
- Types of materials for assembling with nail plates and their purpose
- Assembly sequences and jigs, componentry and construction standards
- Industry standard cross-sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely assemble materials using nail plates within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to assembling materials using nail plates
- following organisational policies and procedures relevant to assembling materials using nail plates
- assembling materials using nail plates in line with work order and construction plans to follow construction standards
- stacking and strapping bundles of completed products in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and

RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards

RANGE STATEMENT

- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Materials may include:

- components
- beams
- other solid lengths of timber joined at the ends with the aid of nail plates

Work order is to include:

- instructions for the assembly and despatch of materials from the work site

and may include:

- construction plans or drawings
- type of product
- size
- quantity
- grade

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber

Nail plates

are (usually) galvanised plates of varying size with a multitude of protruding points (nails) which hold the components together

Equipment may include:

- measuring equipment
- assembly jigs

RANGE STATEMENT

- nail plate presses
 - staple guns
 - nail guns
 - compressor or compressed air supply
 - marking equipment
 - strapping equipment
- Set-up jigs** may include:
- enterprise manufactured templates which assist in the positioning of components during the assembly process
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Timber components** are the sections of timber or timber product which have been pre-cut in readiness for assembly and have been cut to follow the construction plans and cutting list
- Defective components** may include:
- components with an unacceptable level of:
 - warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
- Disposing of** may include:
- recycling defective components
 - re-using defective components
- Dealing with** may include:
- repairing nail plates damaged during the process
 - disposing of sub-standard nail plates and nail plates that cannot be repaired
- Assembly faults** may include:
- incorrectly positioned joints
 - timber splits from nailing

RANGE STATEMENT

- Stacked** may include:
- incorrectly positioned nail plates
 - preparing for transport categorising in common size, shape
 - marking lots in line with work order and site requirements
 - locating as not to block access or passage
- Strapped** may include:
- securing bundles with metal or plastic strap to prevent slippage without risk of strap breakage or damage to products
 - tightening and tensioning using hand-held equipment to prevent slippage without risk of strap breakage or damage to products
- Equipment faults** may include:
- damaged equipment components
 - electrical faults
- Records and reports** may include:
- product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW2206B De-stack seasoning racks

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assess and control dried boards, separate them from the seasoning racks, and monitor their use and supply for the timber dressing process

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2206A De-stack seasoning racks

Application of the Unit

Application of the unit

The unit involves de-stacking seasoning racks in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Prepare for de-stacking 2. De-stack racks | <ol style="list-style-type: none"> 2.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to de-stacking seasoning racks are identified and followed 2.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> 2.3. Type and quantity of <i>boards</i> to be <i>de-stacked</i> are assessed and acquired from the <i>seasoning racks</i> 2.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 2.5. De-stacking process is planned in line with site procedures 2.6. <i>Communication</i> with others is established and maintained in line with OHS requirements 2.7. Racks are <i>visually assessed</i> for board type, size and quality 2.8. Racks that do not meet process requirements are rejected and <i>disposed of</i> in line with site procedures |
|---|--|

ELEMENT	PERFORMANCE CRITERIA
	and environmental requirements
	2.9. <i>Moisture content</i> of boards is measured and boards approved for de-stacking
	2.10. Racks are loaded onto <i>separation equipment</i> in line with site procedures
	2.11. Boards are separated and loaded onto conveyor systems
	2.12. <i>Bearers</i> and other protective timber are removed and stored for return to stacking area
	2.13. <i>Spacing stick</i> removal and collection are checked for correct operation and stored
	2.14. De-stacking area is kept clear of timber scraps and timber scraps are disposed of in line with site procedures and environmental requirements
3. Monitor board usage and maintain supply	3.1. Conveyor transfer procedures are maintained free of blockages
	3.2. Racks are supplied to board separation equipment consistent with required size and species for <i>dressing</i>
	3.3. Dressing process size changes are received and board supply changed at designated times
	3.4. Changeover points are monitored in line with site requirements
	3.5. De-stacking process, board supply and equipment faults are <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely de-stack seasoning racks
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to

REQUIRED SKILLS AND KNOWLEDGE

complete a task

- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for de-stacking seasoning racks
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for de-stacking seasoning racks
- Environmental risks and hazards
- De-stacking techniques
- Moisture content and seasoning methods
- Mechanical separation systems
- Supply procedures
- Grading markings and quality standards
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and

EVIDENCE GUIDE

efficiently de-stack seasoning racks in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to de-stacking seasoning racks
 - following organisational policies and procedures relevant to de-stacking seasoning racks
 - de-stacking seasoning racks in readiness for allocation of timber to storage or downstream operations
 - accurately setting board separation equipment parameters
 - supplying de-stacked timber for the dressing process
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills

EVIDENCE GUIDE

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment

RANGE STATEMENT

- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements

RANGE STATEMENT

(waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the separation and supply of timber

and may include:

- type
- width
- length
- thickness
- quantity

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Boards may include:

- native timber species
- imported timber species
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber

De-stacking

- is the process of breaking down seasoning racks, moisture testing the boards and visually assessing their appearance quality
- includes separating the boards from the rack bearers and spacing sticks

Seasoning racks are to include:

- air seasoning or kiln seasoning racks
- timber, steel or mobile racks with bearers and spacing sticks

Equipment is to include:

- mechanical board separation machines

and may include:

- tilt hoist
- drop slides
- waterfalls
- singulators

RANGE STATEMENT

- tray sorters

and is to include:

- procedures for equipment lock-out such as:
 - protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Visual assessment is

the assessment of timber to determine potential finish, quality and faults

Disposing of may include:

- recycling rejected racks/timber scraps
- re-using rejected racks/timber scraps

Moisture content

is the amount of moisture maintained in timber or timber products after kiln drying or to avoid cracking and deforming

Separation equipment

refer to equipment

Bearers

are large heavy timbers used to support loads of stacked timber in seasoning racks

Spacing sticks

are used between layers of drying timber in seasoning racks

Dressing

is the process of converting in-the-rough timber to planed clean timber using thicknessers and surface planers

Records and reports may include:

- board separation requirements
- supply requirements
- product type
- size
- inspection

RANGE STATEMENT

- grading and marking outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW2207B Round softwood logs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to round softwood logs to a set diameter. The unit includes assessing logs for diameter, species, faults and moisture content

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2207A Round softwood logs

Application of the Unit

Application of the unit

The unit involves rounding softwood logs in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for rounding	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to rounding softwood logs are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>logs</i> to be <i>rounded</i> are selected from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Rounding process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Round logs	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Scanner</i> is calibrated in line with site requirements</p> <p>2.3. Material is fed into the machine at the <i>feed rate</i> prescribed by organisational requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Rounding process is maintained and adjusted to produce the required quantity of logs and to maximise the feed rate
	2.5. Rounding process and <i>conveyors</i> are regularly checked and adjusted to maintain the desired quality and output
	2.6. Logs with <i>defects</i> is segregated or rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	2.7. Rounding process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
	2.8. Rounded logs safely directed to storage in a designated location in line with work order requirements
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. Cutters are checked for blunt or damaged condition
	3.3. Blunt or damaged cutters are removed, replaced and <i>dealt with</i> in line with site procedures, manufacturer's recommendations and environmental requirements
	3.4. Machine area is kept clear of dust and debris in line with OHS requirements
4. Complete handover	4.1. Production and quality records are completed and printed in line with standard operating procedures
	4.2. <i>Back-up files</i> are created in line with standard operating procedures
	4.3. Documentation is handed over to changeover operator and briefing of operations conducted

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- The ability to comply with legislation, regulations, standards, codes of practice and established safe practices and procedures related to rounding softwood logs
- Technical skills sufficient to use and maintain relevant tools, machinery and

REQUIRED SKILLS AND KNOWLEDGE

equipment; efficiently and safely round softwood logs

- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to procedures for recording and reporting workplace information
- Numeracy skills sufficient to estimate, measure and calculate diameters, machine settings and calibrations and time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes to round softwood timber
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for rounding softwood logs
- Environmental risks and hazards
- Log rounding systems, processes, feed rates and finish
- Characteristics of timber and timber defects
- Cutter condition assessment
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely round softwood logs within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- follow applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to rounding softwood logs
- follow organisational policies and procedures relevant to rounding softwood logs
- rounding softwood logs in line with the work order and within prescribed organisational specifications
- conducting operator maintenance on rounding plant
- storing poles in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks,

EVIDENCE GUIDE

with questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements

RANGE STATEMENT

(waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the rounding of logs and despatch of logs from the work site to down-stream processing

and may include:

- treating
- species
- diameter
- length
- quantity
- grade

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Logs is to include:

assessment of:

- diameter range
- curvature
- faults
- species
- moisture content

Rounding

is the process of forcing a log through a rounding machine which shapes the debarked log into a round pole, making the pole available for further down-stream processing and out-feeding the waste for landscaping supplies

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components

RANGE STATEMENT

- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment is to include:

- measuring equipment
- rounding plant

and may include:

- automated storage-conveyor systems
- automated diameter and length sorting systems

and is to include:

- procedures for machine lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- rounding plant has been set-up correctly
- cutters are installed accurately
- machinery is operating to optimum performance

RANGE STATEMENT

Scanner is to include:

- calibration for sizing
- problem identification such as:
 - tangles
 - sorting pockets
 - monitor failure

Feed rate is to include:

- rate of speed the material is passed through the machine affecting the sharpness of the cutters
- finish of the material
- production output

Conveyors are to include:

- belts, chutes or travelator methods of transporting logs to and from the rounding plant, which may be automated in conjunction with the log storage area

Defects may include:

- incorrect moisture content
- warp
- wane
- curvature
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling rejected timber
- re-using rejected timber

Recorded and reported may include:

- the rounding system
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Dealing with may include:

- repairing blunt or damaged cutters
- disposing of blunt or damaged cutters that

RANGE STATEMENT

cannot be repaired

Back-up file

is the process of copying operating documents and records onto a computer back-up device which is subsequently removed from the site

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW2208B Split wood products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to split post and firewood in the production of fencing components, landscaping supplies and commercial firewood operations

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2208A Split wood products

Application of the Unit

Application of the unit The unit involves splitting wood products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------|--|
| 1. Prepare for splitting | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to splitting wood products are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>products</i> to be <i>split</i> are identified and appropriate arrangements made</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Splitting process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Split wood products | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Material is fed into the equipment at the <i>feed rate</i> prescribed by organisational requirements</p> <p>2.3. Splitting process is maintained and adjusted to</p> |

ELEMENT**PERFORMANCE CRITERIA**

- produce the required quantity of product and maximise the feed rate
- 2.4.Splitting process is regularly checked and adjusted to maintain the desired quality and output
- 2.5.*Unsatisfactory product* is segregated or rejected and *disposed of* in line with site procedures and environmental requirements
- 2.6.Splitting process and equipment faults are *recorded and reported* to the appropriate personnel
- 2.7.Product is safely directed to storage in a designated location in line with work order requirements
3. Conduct operator maintenance
- 3.1.Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 3.2.Splitting saw is checked for blunt or damaged condition in line with site procedures
- 3.3.Blunt or damaged splitting equipment is identified and *dealt with* in line with site procedures, manufacturer's recommendations and environmental requirements
- 3.4.Machine area is kept clear of dust and debris in line with OHS requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely split wood products
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for splitting wood products
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for split wood products
- Environmental risks and hazards
- Wood product splitting systems
- Characteristics of timber and timber defects
- Splitting processes, feed rates and finish
- Blade condition assessment
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently split wood products within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to splitting wood products
- following organisational policies and procedures relevant to splitting wood products
- splitting wood products in line with the work order and within prescribed organisational specifications
- conducting operator maintenance on saw machinery
- storing wood products in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and

RANGE STATEMENT

- carrying
- machine isolation and guarding
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements** may include:
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the splitting of wood products and despatch of products from the work site to down-stream processing
- and may include:
- treating

RANGE STATEMENT

- species
- diameter
- length
- quantity
- grade

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Products include post or firewood, and will be assessed for:

- diameter range
- length
- curvature
- faults
- species
- moisture content

Splitting

is the process of using a saw or hydraulic rams to convert round wood into two or more pieces producing split posts or firewood

Equipment may include:

- hydraulic axe and rams
- circular saws
- bench saws
- band saws
- mechanical feed

and is to include:

- procedures for machine lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding

RANGE STATEMENT

- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- saw has been set-up correctly
- blades are installed accurately
- machinery is operating to optimum performance

Feed rate is to include:

- rate of speed the material is passed through the machine affecting the sharpness of the blades
- finish of the material
- production output

Unsatisfactory product may include:

- incorrect moisture content
- warp
- wane
- curvature
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling unsatisfactory product
- re-using unsatisfactory product

Records and reports may include:

- sawing procedures
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system other appropriate organisational communication

RANGE STATEMENT

- Dealing with** may include:
- system
 - repairing blunt or damaged splitting equipment
 - disposing of blunt or damaged splitting equipment that cannot be repaired

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW2209B Dismantle, transport and assemble hand portable sawmill

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to dismantle, transport and assemble a hand portable sawmill for the purposes of milling green boards at an on-site location

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2209A Dismantle, transport and assemble hand portable sawmill

Application of the Unit

Application of the unit

The unit involves dismantling, transporting and assembling a hand portable sawmill in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--------------------------|--|
| 1. Prepare for operation | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to dismantling, transporting and assembling a hand portable sawmill are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>logs</i> to be <i>sawn</i> are identified and location checked</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Set-up, transport and dismantling process is planned to optimise available recovery time</p> <p>1.6. <i>Communication</i> with others is established and</p> |
|--------------------------|--|

ELEMENT	PERFORMANCE CRITERIA
2. Dismantle, transport and assemble hand portable sawmill	<p data-bbox="627 295 1161 331">maintained in line with OHS requirements</p> <p data-bbox="580 344 1278 421">2.1.Sequence of activities is followed to dismantle the sawmill in line with manufacturer's instructions</p> <p data-bbox="580 432 1206 533">2.2.Dismantled sawmill equipment is loaded for transportation, secured and moved to the new location</p> <p data-bbox="580 544 1267 656">2.3.Proposed new work site is inspected for potential hazards and interference to work flow in line with environmental protection requirements</p> <p data-bbox="580 667 1305 768">2.4.Site for logs, stacking of sawn boards and waste is assessed, selected, cleared and made safe in line with environmental protection requirements</p> <p data-bbox="580 779 1291 891">2.5.Sequence of activities is followed to assemble hand portable sawmill in line with manufacturer's instructions</p> <p data-bbox="580 902 1294 969">2.6.<i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p data-bbox="580 981 1270 1088">2.7.Hand portable sawmilling establishment and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>
3. Conduct operator maintenance	<p data-bbox="580 1111 1291 1178">3.1.Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p data-bbox="580 1189 1211 1256">3.2.Saw blades are checked for blunt or damaged condition</p> <p data-bbox="580 1267 1267 1335">3.3.Saw blades are removed and replaced in line with manufacturer's recommendations</p> <p data-bbox="580 1346 1294 1422">3.4.Machine is kept clear of dust and debris in line with OHS requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely dismantle, transport and assemble hand portable sawmill
- Communication skills and interpersonal techniques sufficient to interact

REQUIRED SKILLS AND KNOWLEDGE

appropriately with colleagues and others in the workplace

- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for dismantling, transporting and assembling a hand portable sawmill
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for dismantling, transporting and assembling a hand portable sawmill
- Environmental risks and hazards
- Hand portable sawmilling systems
- Blade condition assessment
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently dismantle, transport and assemble hand

EVIDENCE GUIDE

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>portable sawmill within organisational requirements</p> <p>The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to dismantling, transporting and assembling a hand portable sawmill • following organisational policies and procedures relevant to dismantling, transporting and assembling a hand portable sawmill • dismantling, transporting and assembling a hand portable sawmill in readiness to produce green boards in line with the work order and within prescribed organisational specifications • conducting operator maintenance on hand portable sawmill machinery
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills

EVIDENCE GUIDE

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment

RANGE STATEMENT

- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements

RANGE STATEMENT

(waste minimisation disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for hand portable sawmill location
- assembly
- dismantling
- transport from the work site to the next worksite

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Logs identification for sawing is to include:

- assessment of diameter range
- curvature
- faults
- species
- moisture content

Sawing

is the process of cutting a log into parts including green boards and off-cuts

Equipment is to include:

- hand portable sawmills
- procedures for machine lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

RANGE STATEMENT

Pre start-up checks

are conducted to ensure:

- saw has been set up correctly
- blades are installed accurately
- machinery is operating to optimum performance

Records and reports may include:

- the dismantling, transport and assembly procedures
- product type
- size
- inspection
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system other appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW2210B Prepare for timber treatment operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare for timber treatment operations with authorised chemicals and specified timbers

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW2210A Prepare for timber treatment operations

Application of the Unit

Application of the unit The unit involves preparing for timber treatment operations in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for treating	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to preparing for timber treatment operations are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>timber</i> to be <i>treated</i> and <i>chemicals</i> to be used are assessed and acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is prepared for work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Prepare for timber treatment	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Timber supply to the treatment process is monitored and maintained</p> <p>2.3. <i>Water</i> requirements are identified and checked in line with organisational procedures and</p>

ELEMENT**PERFORMANCE CRITERIA**

- environmental requirements
- 2.4. *Moisture content* of timber is tested in line with organisational procedures
- 2.5. *Preservative solution* strength is checked and maintained for specified strength and volume in line with environmental requirements
- 2.6. Treated timber is safely handled and transferred to storage location
- 2.7. Timber treatment preparation processes and equipment faults are *recorded and reported* to the appropriate personnel
- 2.8. Chemicals are handled and stored in line with regulatory and environmental requirements, and stock levels reported
- 2.9. Treating area is kept clear of dust, shavings and debris in line with OHS requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely prepare for timber treatment operations
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for preparing for timber treatment operations
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment

- Organisational and site standards, requirements, policies and procedures for preparing for timber treatment operations
- Environmental risks and hazards
- Timber treating procedures
- Handling of treated products and chemicals
- Methods of visual inspection
- Characteristics of timber and chemicals
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently prepare for timber treatment operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to preparing for timber treatment operations
- following organisational policies and procedures

EVIDENCE GUIDE

- relevant to preparing for timber treatment operations
- preparing for timber treatment operations in readiness for storage and processing
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations,

RANGE STATEMENT

certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the preparation of timber treatment operations

and may include:

- timber supplies
- chemical supplies
- equipment set up
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers

RANGE STATEMENT

- Timber** may include:
- clients
 - colleagues
 - managers
 - native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - stress and non-stress graded timber
 - sleepers
 - logs
 - rounded poles
 - beams
 - laminated beams
- Treating**
- is the process of impregnating preservative solution filled with chemicals in to the timber to provide it with a durable resistance to weather and insect attack
- and may include:
- full cell
 - modified cell
 - empty cell
 - double vacuum
 - dip diffusion
 - vat and sprays
 - other processes developed by the enterprise
- and is to include:
- handling techniques for products and chemicals in line with OHS regulations and environmental laws
- Chemicals** may include:
- those specified by the enterprise and that follow regulatory requirements
- and may include:
- light organic solvents
- Storage locations** may include:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components

RANGE STATEMENT

- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- treaters
- vats
- ovens
- resin tanks
- effluent tanks

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately and operating to optimum performance

Water may include:

- stormwater
- contaminated water

RANGE STATEMENT

- bore water
 - recycled dam water
 - town mains water
- Moisture content**
- is the amount of moisture maintained in timber or timber products after kiln drying or to avoid cracking and deforming
 - in Australia generally ranges between 10% in warmer, more humid climates to 14% in cooler climates
- Preservative solution** may include:
- water-borne solutions
 - oil-based solutions
 - solvent-based solutions
- Records and reports** may include:
- treatment preparation requirements
 - charge records
 - product type
 - size
 - inspection
 - grading outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3201B Treat timber

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to treat timber with authorised chemicals and to operate the treatment plant to complete treatment cycles

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3201A Treat timber

Application of the Unit

Application of the unit

The unit involves treating timber in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for treating	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to treating timber are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>timber</i> to be <i>treated</i> and <i>chemicals</i> to be used are assessed and acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Treating <i>cycles</i> are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Treat timber	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Water management</i> procedures are applied</p> <p>2.3. <i>Moisture content</i> of timber is tested in line with</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>organisational procedures</p> <p>2.4. <i>Preservative solution</i> strength is checked, maintained and adjusted for specified strength and volume</p> <p>2.5. <i>Treating plant</i> is brought to full operating condition and operating parameters regularly checked in line with site requirements</p> <p>2.6. <i>Branding</i> is completed and checked in line with regulatory requirements</p> <p>2.7. Treated timber is safely handled and transferred to storage location</p> <p>2.8. Timber treating process and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>
3. Conduct operator maintenance	<p>3.1. Treating plant shut down procedures are followed in line with OHS legislation and site procedures</p> <p>3.2. Treating mechanisms are checked for effective condition</p> <p>3.3. Chemicals are handled and stored in line with regulatory requirements and stock levels reported</p> <p>3.4. Treating area is kept clear of dust, shavings and debris in line with OHS requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely treat timber
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for treating timber
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for treating timber
- Environmental risks and hazards
- Timber treating techniques
- Handling of treated products and chemicals
- Methods of visual inspection
- Characteristics of timber and chemicals
- Water and chemical management procedures
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently treat timber in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the

EVIDENCE GUIDE

competency in this unit

requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to treating timber
- following organisational policies and procedures relevant to treating timber
- treating timber in readiness for storage and/or processing
- conducting operator maintenance on the treating equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and

RANGE STATEMENT

- carrying
- machine isolation and guarding
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements** may include:
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for timber treating
- and may include:
- treating method
 - colour
 - type

RANGE STATEMENT

- width
- length
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Timber may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- sleepers
- logs
- rounded poles
- beams or laminated beams

Treating

is the process of impregnating preservative solution filled with chemicals into the timber to provide it with a durable resistance to weather and insect attack

and may include:

- full cell
- modified cell
- empty cell
- double vacuum
- dip diffusion
- vat and sprays
- other processes developed by the enterprise

and is to include:

- handling techniques for products and chemicals in line with OHS regulations and environmental laws

Chemicals may include:

- those specified by the enterprise and that follow regulatory requirements

RANGE STATEMENT

Storage locations may include:

- light organic solvents
- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- treaters
- vats
- ovens
- resin tanks
- effluent tanks

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Cycles

are the times taken for each stage of the process

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences

RANGE STATEMENT

- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- oven and rack systems have been set-up correctly
- systems are performing accurately and operating to optimum performance

Water management may include:

- stormwater
- contaminated water
- bore water
- recycled dam water
- town mains water

Moisture content

- is the amount of moisture maintained in timber or timber products after kiln drying or to avoid cracking and deforming
- in Australia generally ranges between 10% in warmer, more humid climates to 14% in cooler climates

Preservative solution may include:

- water-borne solutions
- oil-based solutions
- solvent-based solutions

Treating plant

is the source of providing preservative solution to the timber in a controlled setting

Branding may include:

- burning
- hammer impressions
- ink
- tags

Records and reports may include:

- treating requirements
- charge records
- product type
- size
- inspection
- grading and branding outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

RANGE STATEMENT

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3202B Produce sawn green boards

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and re-saw material to width and on the cant with sawing machinery to optimise timber conversion and usability. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3202A Produce sawn green boards

Application of the Unit

Application of the unit

The unit involves producing sawn green boards in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---------------------------|---|
| 1. Prepare for conversion | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to producing sawn green boards are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be cut for <i>green boards</i> are acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Timber conversion and <i>saw set-up</i> are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Produce green boards | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Saw, carriage and feed are set, regularly checked and adjusted to suit conversion plan, <i>ordered sizes</i> and</p> |

ELEMENT**PERFORMANCE CRITERIA***tolerances*

- | | | |
|----|-------------------------------------|--|
| 3. | <p>Conduct operator maintenance</p> | <p>2.3. Timber supply is monitored to ensure constant supply to the saw</p> <p>2.4. Saw bench is operated to optimise the production of green boards without damage to boards or saw blade and <i>feed rate</i> maintained</p> <p>2.5. Material with <i>defects</i>, incorrect cuts and off-cuts are <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.6. Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p> <p>2.7. Material is safely <i>stacked</i> in a designated location in line with work order requirements</p> <p>3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>3.2. Saw and saw blades are checked for blunt or damaged condition in line with site procedures</p> <p>3.3. Blunt or damaged saws are <i>dealt with</i> in line with site procedures, manufacturer's recommendations and environmental requirements</p> <p>3.4. Saw area is kept clear of dust, off-cuts and debris in line with OHS requirements</p> |
|----|-------------------------------------|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Efficiently and safely convert timber
- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; accurately identify blunt or damaged blades
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and

REQUIRED SKILLS AND KNOWLEDGE

demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing sawn green boards
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing sawn green boards
- Environmental risks and hazards
- Characteristics of green timber and timber defects
- Cutting patterns and sequences
- Saw feed rates
- Saw blade condition assessment
- Industry standard cross-sections and lengths
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce sawn green boards within organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to producing sawn green boards
- following organisational policies and procedures relevant to producing sawn green boards
- producing sawn green boards in line with the work order and within prescribed organisational tolerances
- conducting operator maintenance on an automatic feed controlled rip saw
- stacking batches of cut material in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related

EVIDENCE GUIDE

conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and

RANGE STATEMENT

	substances
	<ul style="list-style-type: none"> • safe forest practices including required actions relating to forest fire • manual handling including shifting, lifting and carrying • machine isolation and guarding
Environmental requirements may include:	<ul style="list-style-type: none"> • legislation • organisational policies and procedures • workplace practices
Legislative requirements:	are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include: <ul style="list-style-type: none"> • award and enterprise agreements • industrial relations • Australian Standards • confidentiality and privacy • OHS • the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care
Organisational requirements may include:	<ul style="list-style-type: none"> • legal • organisational and site guidelines • policies and procedures relating to own role and responsibility • quality assurance • procedural manuals • quality and continuous improvement processes and standards • OHS, emergency and evacuation procedures • ethical standards • recording and reporting requirements • equipment use and maintenance and storage requirements • environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
Timber conversion	is the process of producing boards by re-sawing green flitches or cants to optimise single boards

RANGE STATEMENT

maximising the amount of boards per flitch or cant

Work order is to include:

- instructions for the cutting and despatch of green timber boards from the work site

and may include:

- type
- size
- width
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- hardwood
- softwood
- native timber species
- imported timber species

Green boards

- are those which are still in the rough (not dressed) and have not been seasoned, having just been converted from green timber
- moisture content is yet to be controlled through air drying or kiln drying

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification

RANGE STATEMENT

- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- measuring equipment
- power operated, automatic feed controlled ripping saws where the cut is controlled relative to the board guides and fence
- saws with adjustable cant (sloping table)
- saws with one blade
- rip saws
- table saws
- bench saws

and is to include:

- procedures for saw lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Saw set-up is to include:

- setting depth
- width and cant of cut measured from the fence in line with product order and allowing for kerf (width of saw cut)

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately and

RANGE STATEMENT

- operating to optimum performance
- Ordered sizes** may include:
- a range of sizes cut to widths usually increasing in 5 mm increments
- Tolerances** are a set limit for cutting over or under the required width within a set margin of acceptance usually + or - 0.5 mm or in line with order or organisational requirements
- Feed rate** is to include:
- rate of speed the material is passed through the machine affecting the sharpness of the cutting blades
 - finish of the material
 - production output
- Defects** may include:
- warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
- Disposing of** may include:
- recycling material with defects, incorrect cuts and off-cuts
 - re-using material with defects, incorrect cuts and off-cuts
- Records and reports** may include:
- product type
 - size
 - width
 - cant
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

RANGE STATEMENT

Stacking may include:

- preparing for transport
- categorising in common size, length, width and cant
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Dealing with may include:

- repair of damaged saws and blunt or damaged saw blades
- disposing of saws and saw blades that cannot be repaired

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3203B Break down logs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare logs for sawing, to set up the processing of logs, to break down the logs and maintain the production flow

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves breaking down logs in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for sawing	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to <i>breaking down logs</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Sawing process is planned in line with site procedures and to <i>optimise</i> volume and quality of <i>sawn recovery</i></p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Break down logs	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Logs are secured with <i>dogs</i> minimising damage and aligned with the saw</p> <p>2.3. Logs are cleared of foreign matter and fed into the saw at the <i>feed rate</i> prescribed by organisational requirements</p> <p>2.4. Break down process is regularly checked and</p>

ELEMENT	PERFORMANCE CRITERIA
	adjusted to maintain the desired quality and output
	2.5. Break down process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
	2.6. Sub-standard material from the break down process is rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	2.7. Processed logs are safely directed to the next stage of processing or storage in a designated location in line with work order requirements
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. Saw and saw blades are checked for blunt or damaged condition
	3.3. Blunt or damaged saws and saw blades are identified and <i>dealt with</i> in line with site procedures, manufacturer's recommendations and environmental requirements
	3.4. Machine area is kept clear of dust and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely break down logs
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures; accurately identify blunt or damaged saws

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for breaking down logs
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for breaking down logs
- Environmental risks and hazards
- Log break down systems
- Characteristics of timber and timber defects
- Break down processes, feed rates and finish
- Blade condition assessment
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently break down logs within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to breaking down logs
 - following organisational policies and procedures relevant to breaking down logs
 - breaking down logs to produce sections in line with the work order and within prescribed organisational specifications
 - conducting operator maintenance on saw machinery
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding

RANGE STATEMENT

Environmental requirements
may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Breaking down logs

is the process of cutting a log into flitches, cants or slabs, taking into account the characteristics of the log, such as regrowth logs, and processing requirements

and may include:

- assessment of diameter range
- curvature

RANGE STATEMENT

- Work order** is to include:
- faults
 - species
 - instructions for the sawing logs and despatch of flitches or cants from the work site to down-stream processing

and may include:

- treating
- species
- diameter
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- circular saws
- bench saws
- overhead frame saws or band saws (single, twin, single edges and twin edges)
- mechanical feed
- conveyors
- standard three headed dog carriages
- flat top carriages with head rigs

and is to include:

- procedures for machine lock-out, i.e. protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Optimising** includes:
- planning the cutting of a log to achieve the most from it
 - ensuring environmental requirements are central to this planning process

Sawn recovery

- is the volume of timber sawn from a resource compared to the volume of that resource

RANGE STATEMENT

- Communication** may include:
- is expressed as a percentage - $\text{sawn timber volume} / \text{initial log volume} \times 100$
 - maximises the value of the resource
 - verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Pre start-up checks** are conducted to ensure:
- saw has been set-up correctly
 - blades are installed accurately
 - machinery is operating to optimum performance
- Dogs** are the carriage devices which clamp logs during break down
- Feed rate** is to include:
- rate of speed the material is passed through the machine affecting the sharpness of the blades
 - finish of the material
 - production output
- Records and reports** may include:
- the sawing procedures
 - product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another

RANGE STATEMENT

appropriate organisational communication system

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Dealing with may include:

- repairing blunt or damaged saws and saw blades
- disposing of saws and saw blades that cannot be repaired

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3204B Saw flitches and cants

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare log sections for sawing into flitches and cants, and includes the set up process and maintaining the production flow

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3204A Saw flitches and cants

Application of the Unit

Application of the unit

The unit involves sawing flitches and cants in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for sawing	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to sawing flitches and cants are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Sawing process is planned in line with site procedures and to <i>optimise</i> volume and quality of recovery</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Saw flitches and cants	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. When necessary, <i>log sections</i> are secured with <i>dogs</i> minimising damage and aligned with the saw</p> <p>2.3. Log sections are cleared of foreign matter and fed into the saw at the <i>feed rate</i> prescribed by</p>

ELEMENT**PERFORMANCE CRITERIA**

- organisational requirements
- 2.4.Sawing sequence is planned, maintained and adjusted to produce the required quantity of flitches or cants and to maximise the feed rate
- 2.5.Sawing process is regularly checked and adjusted to maintain the desired quality and output
- 2.6.Log sections with *defects* and sawn edges are segregated or rejected and *disposed of* in line with site procedures and environmental requirements
- 2.7.Sawing process and equipment faults are *recorded and reported* to the appropriate personnel
- 2.8.Flitches or cants are safely directed to storage in a designated location in line with work order requirements
3. Conduct operator maintenance
- 3.1.Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 3.2.Saw and saw blades are checked for blunt or damaged condition in line with site procedures
- 3.3.Blunt or damaged saws and saw blades are *dealt with* in line with site procedures, manufacturer's recommendations and environmental requirements
- 3.4.Machine area is kept clear of dust and debris in line with OHS requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; accurately identify blunt or damaged saws; efficiently and safely saw flitches and cants
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task

REQUIRED SKILLS AND KNOWLEDGE

- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sawing flitches and cants
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sawing flitches and cants
- Environmental risks and hazards
- Flitch and cant sawing systems
- Characteristics of timber and timber defects
- Sawing processes, feed rates and finish
- Blade condition assessment
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently saw flitches and cants within organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to sawing flitches and cants
- following organisational policies and procedures relevant to sawing flitches and cants
- sawing log sections to produce flitches and cants in line with the work order and within prescribed organisational specifications
- conducting operator maintenance on saw machinery

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements**
may include:
- manual handling including shifting, lifting and carrying
 - machine isolation and guarding
 - legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements**
may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Flitch is a large piece of sawn log section cut longitudinally, sawn on at least two surfaces at ninety degrees and intended for further cutting

Cant is a thick piece of timber with two or more

RANGE STATEMENT

surfaces cut longitudinally on the angle (obliquely) sawn from a log section and intended for further sawing

Work order is to include:

- instructions for the sawing logs and despatch of flitches or cants from the work site to down-stream processing

and may include:

- treating
- species
- size
- length
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- circular saws
- bench saws
- overhead frame saws or band saws (single, twin, single edges and twin edges)
- mechanical feed
- conveyors
- standard three headed dog carriages
- flat top carriages with head rigs

and is to include:

- procedures for machine lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Optimising includes:

- planning the cutting of a log to achieve the most from it
- ensuring environmental requirements are central to this planning process

RANGE STATEMENT

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- saw has been set-up correctly
- blades are installed accurately
- machinery is operating to optimum performance

Log sections

are large sections and lengths of timber available for further processing as a result of breaking down logs

Dogs

- are the carriage devices which support logs during break down

Feed rate is to include:

- rate of speed the material is passed through the machine affecting the sharpness of the blades
- finish of the material
- production output

Defects may include:

- defects arising from a change in moisture content
- warp
- wane
- curvature
- shakes
- insect defects
- knots and resin pockets
- sweep
- taper
- end splits
- shape

Disposing of may include:

- recycling timber sections with defects and sawn edges

RANGE STATEMENT

- Records and reports** may include:
- re-using timber sections with defects and sawn edges
 - the sawing procedures
 - product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system other appropriate organisational communication system
- Dealing with** may include:
- repair of damaged saws and blunt or damaged saw blades
 - disposing of saws and saw blades that cannot be repaired

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3205B Dry hardwood

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare timber racks for processing, load kilns, monitor and control kiln conditions to dry and recondition hardwood, unload kilns and process timber

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3205A Dry hardwood

Application of the Unit

Application of the unit The unit involves drying hardwood in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for drying	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to drying hardwood are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>hardwood</i> to be <i>dried</i> are assessed and acquired from the <i>conversion process</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Oven sections and sample boards are selected and cut in line with standard operating procedures</p> <p>1.6. Drying process is planned in line with site procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Load and control kiln conditions	<p>2.1. Racks to be dried are <i>visually assessed</i> for consistent drying characteristics and adjusted to meet site</p>

ELEMENT**PERFORMANCE CRITERIA**

- requirements
- 2.2. **Moisture content** is measured and routinely compared with anticipated levels in line with standard operating procedures
 - 2.3. **Pre start-up checks** are carried out on equipment in line with site requirements
 - 2.4. **Emergency shut down** procedures are followed in case of alarm being triggered
 - 2.5. **Kiln** is loaded with racks selected for processing and loading completed and reported
 - 2.6. Sample boards are weighed during drying in line with standard operating procedures
 - 2.7. **Baffles and blankets** are positioned in line with standard operating procedures
 - 2.8. Kiln control settings are regularly adjusted and routinely checked with site **drying schedules**
3. Unload kiln and process hardwood
 - 3.1. **Drying end point** is identified and kiln made safe for entry
 - 3.2. Kiln is opened and moisture content of processed hardwood checked in line with anticipated **equilibrium moisture content (EMC)**
 - 3.3. **Moisture probes** and baffles are removed from timber in line with standard operating procedures
 - 3.4. Kiln change is monitored and reconditioning or high humidity treatment conducted as required
 - 3.5. Hardwood is directed and **moved to storage** or processing operations in line with site requirements
 - 3.6. Sub-standard material is rejected and **disposed of** in line with site procedures and environmental requirements
 - 3.7. Work area is cleaned in line with site requirements
 - 3.8. Drying process and equipment faults are **recorded and reported** to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely dry hardwood
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to measure moisture levels, and to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for drying hardwood
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for dry hardwood
- Environmental risks and hazards
- Using energy effectively and efficiently
- Drying techniques
- Kiln operations
- Basic knowledge of how wood dries
- Methods of visual inspection
- Characteristics of hardwood
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently dry hardwood to target end moisture content in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to drying hardwood
- following organisational policies and procedures relevant to drying hardwood
- drying hardwood to target end moisture content in readiness for storage and/or processing
- conducting kiln operations
- correctly calculating moisture content from weighing sample boards

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and

RANGE STATEMENT

may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolating and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- instructions for the drying of hardwood

Work order is to include:

and may include:

- species
- colour
- type
- width
- length
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Hardwood

usually comes from trees with leaf foliage and has large tube like vessels or pores consisting of short stubby cells varying in size

and may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- preservative treated timber

Drying

is the process of:

- placing hardwood in a heat controlled kiln to dry high levels of moisture from timber causing moisture loss from cells
- followed by humidity generation to

RANGE STATEMENT

recondition timber to its former shape and desired EMC

- finally kiln drying to required moisture content

Conversion process is to include:

- sawing of logs into flitches
- conversion of flitches into green boards

Equipment may include:

- low temperature kilns up to 60 to 70 degrees Celsius with a heat source which may be solar, electricity or gas
- kilns powered by burning wood waste up to temperatures of 90 degrees Celsius
- vacuum dryers
- kilns powered by steam producing boilers

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Visually assessed

is the assessment of materials to determine finish quality and faults

and may include:

- stability
- spacing of strips
- support to minimise warping

Moisture content

is the amount of moisture maintained in timber or timber products after drying to avoid cracking and deforming

and may include:

RANGE STATEMENT

	<ul style="list-style-type: none">• testing for capacitance• resistance• oven-dry conditions
Pre start-up checks	are conducted to ensure: <ul style="list-style-type: none">• equipment has been set-up correctly• systems are performing accurately• equipment is operating to optimum performance
Emergency shut down	is the immediate shutting off of the equipment to prevent an accident or prevent damage to the machine or product
Kiln	refer to equipment
Baffles and blankets	assist in the drying process by controlling air flow
Drying schedule	is the drying times based on moisture content
Drying end point	is the predicted time when the drying process will be completed and the desired moisture content achieved
Equilibrium moisture content (EMC)	is the moisture level to be achieved by drying which will be sustainable in the environment after processing thereby retaining its shape and strength without excessive movement
Moisture probes	are probes pierced into random boards which provide moisture readings on the kiln gauges to assist in modifying the drying schedule
On-site movement of material may include:	the use of: <ul style="list-style-type: none">• conveyor belt systems• track systems• lifting equipment• lifting equipment such as:<ul style="list-style-type: none">• fork lifts• slings• trolley jacks• gantry cranes• loaders• cross transfer trucks

RANGE STATEMENT

assistance with lifting such as:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

Storage may include:

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Records and reports may include:

- drying requirements
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3206B Dry softwood

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare timber racks for processing, load conventional and high temperature kilns, monitor and control kiln conditions to dry and recondition softwood, unload kilns and process timber

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3206A Dry softwood

Application of the Unit

Application of the unit

The unit involves drying softwood in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for drying	1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to drying softwood are identified and followed 1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> 1.3. Type and quantity of <i>softwood</i> to be <i>dried</i> are assessed and acquired from the <i>conversion process</i> 1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Drying process is planned in line with site procedures 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements
2. Load and control kiln conditions	2.1. Racks to be dried are <i>visually assessed</i> for consistent drying characteristics and adjusted to meet site requirements 2.2. <i>Moisture content</i> is measured and routinely

ELEMENT**PERFORMANCE CRITERIA**

- compared with anticipated levels in line with standard operating procedures
- 2.3. *Pre start-up checks* are carried out on equipment in line with site requirements
- 2.4. *Emergency shut down* procedures are followed in case of alarm being triggered
- 2.5. *Kiln* is loaded with racks selected for processing and loading completed and reported
- 2.6. *Baffles and blankets* are positioned in line with standard operating procedures
- 2.7. Kiln control settings are regularly adjusted and routinely checked to site *drying schedules*
3. Unload kiln and process softwood
- 3.1. *Drying end point* is identified and kiln made safe for entry
- 3.2. Kiln is opened and moisture content of processed softwood identified in line with anticipated *equilibrium moisture content*
- 3.3. *Moisture probes* and baffles are removed from timber
- 3.4. Softwood is directed and *moved* to *storage* or processing operations in line with site requirements
- 3.5. Sub-standard material is rejected and *disposed of* in line with site procedures and environmental requirements
- 3.6. Work area is cleaned in line with site requirements
- 3.7. Drying process and equipment faults are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely dry softwood
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to measure moisture levels, and to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for drying softwood
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for drying softwood
- Environmental risks and hazards
- Using energy effectively and efficiently
- Drying techniques
- Kiln operation procedures
- Methods of visual inspection
- Characteristics of softwood
- Distribution processes
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently dry softwood in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to drying softwood
- following organisational policies and procedures relevant to drying softwood
- drying softwood in readiness for storage and/or processing
- conducting kiln operations
- redistributing timber on site using designated equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills

EVIDENCE GUIDE

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment

RANGE STATEMENT

- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements

RANGE STATEMENT

(waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the drying of softwood

and may include:

- species
- colour
- type
- width
- length
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Softwood

is non-pored wood, usually comes from trees with needle like foliage and has a more uniform cell structure native timber species

and may include:

- imported timber species
- dressed timber
- in-the-rough timber
- preservative treated timber

Drying

is the process of:

- placing timber in a heat controlled kiln to dry high levels of moisture from timber causing cell collapse
- followed by humidity generation to recondition timber to its former shape and desired EMC

Conversion process is to include:

- sawing logs into flitches
- converting flitches into green boards

Equipment may include:

- conventional, high temperature, very high temperature and extremely high temperature

RANGE STATEMENT

kilns and vacuum dryers of 60 to 150 degrees Celsius or higher with a heat source that may be steam, hot oil or gas

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Visually assessed

is the assessment of materials to determine finish quality and faults

and may include:

- stability
- spacing of strips
- support to minimise warping

Moisture content

is the amount of moisture maintained in timber or timber products after drying to avoid cracking and deforming

and may include:

- testing for capacitance
- resistance
- oven dry conditions

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Emergency shut down

is the immediate shutting off of the equipment to prevent an accident or prevent damage to the

RANGE STATEMENT

	machine or product
Kiln	refer to equipment
Baffles and blankets	assist in the drying process by controlling moisture
Drying schedule	is the drying times based on moisture content
Drying end point	is the predicted time when the drying process will be completed and the desired moisture content achieved
Equilibrium moisture content (EMC)	is the moisture level to be achieved by drying which will be sustainable in the environment after processing thereby retaining its shape and strength without excessive movement
Moisture probes	are probes pierced into random boards which provide moisture readings on the kiln gauges to assist in modifying the drying schedule
On-site movement of material may include:	the use of: <ul style="list-style-type: none">• conveyor belt systems• track systems• lifting equipment such as:<ul style="list-style-type: none">• fork lifts• slings• trolley jacks• gantry cranes• loaders assistance with lifting such as: <ul style="list-style-type: none">• the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment
Storage may include:	<ul style="list-style-type: none">• storage racks• storage bays• bins• stacks• pallet boxes• modularised storage components• temporary stacking bays (stand, frame or ground)

RANGE STATEMENT

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Records and reports may include:

- drying requirements
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3207B Sharpen band saws

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assess the condition of the band saw, set up the sharpening machine and sharpen the saw with a grinder

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3207A Sharpen band saws

Application of the Unit

Application of the unit

The unit involves sharpening band saws in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for sharpening	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to sharpening band saws are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Band saw <i>blades</i> to be <i>sharpened</i> are removed from the designated machinery</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Sharpening process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Assess condition and set up sharpening equipment	<p>2.1. <i>Cutting performance</i> of blade is assessed for sharpening requirements and blade replacement reviewed in line with site requirements</p> <p>2.2. Condition of <i>teeth, set, tension</i> of blade and prior repairs are assessed for suitability to site</p>

ELEMENT	PERFORMANCE CRITERIA
3. Sharpen band saw blade	<p>requirements</p> <p>2.3. Sharpening machine is selected and grinding wheel changed or <i>dressed</i></p> <p>2.4. Machine settings are adjusted to suit required blade <i>geometry</i> and blade set to manufacturer's recommendations</p> <p>2.5. Selected tooth of blade is aligned with <i>machine feed</i> mechanism</p> <p>3.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>3.2. <i>Tests</i> are conducted to ensure teeth and machine feed mechanism are aligned</p> <p>3.3. Depth of machine cut and in-feed are established from blade condition</p> <p>3.4. Machine sharpening process is monitored to ensure correct grinding conditions and geometry</p> <p>3.5. Sharpening process is completed with all teeth in sharp condition at correct cutting angle and <i>profile</i></p> <p>3.6. Band saw blades that cannot be sharpened or are damaged in the process are <i>disposed of</i> in line with site procedures, manufacturer's recommendations and environmental requirements</p> <p>3.7. Band saw is packaged for protection during return to service</p> <p>3.8. Sharpening and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely sharpen band saws
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation

REQUIRED SKILLS AND KNOWLEDGE

- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sharpening band saws
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sharpening band saws
- Environmental risks and hazards
- Characteristics of band saw blades
- Sharpening methods and geometry
- Tooth setting and/or methods for tooth alignment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently sharpen band saws within organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to sharpening band saws
- following organisational policies and procedures relevant to sharpening band saws
- sharpening band saws in line with the work order and within prescribed organisational requirements
- removing and replacing band saw blades from equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements**
may include:
- manual handling including shifting, lifting and carrying
 - machine isolation and guarding
 - legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements**
may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the sharpening of band saw blades in designated equipment

and may include:

- instructions for the environmental monitoring

RANGE STATEMENT

- Appropriate personnel** may include:
- of work and procedures
 - environmental care requirements relevant to the work
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Blades** may include:
- wide band saw blades used for processing timber products
 - narrow band saw blades used for cutting both ferrous and non-ferrous materials
- Sharpening** is to include:
- the amount of material removed from the tooth profile
 - the ability to produce the required profile
 - the speed at which the abrasive wheel can remove material without affecting steel characteristics, and the quality of surface texture left by the abrasive wheel along the entire profile and at the intersection of all cutting edge angles
- Equipment** may include:
- alternative sharpening machines and grinding wheels
- and is to include:
- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Cutting performance** is to include:
- saw performance balanced against achievement of required production time

RANGE STATEMENT

- degree of deviation in the range of sawn products
- Teeth** are to include:
- sharpness of each tooth
 - damage to teeth
 - pitch
 - number of teeth per metre
- Set**
- is the distance cutting edge points extend from the blade surface (or plane) to provide the blade clearance from the material being sawn
 - in wide bandsaw blades is achieved by swaging and shaping, or tipping tooth points
 - in narrow bandsaw blades applies to, for example, alternate spring set and wave set to provide clearance
- Tension** is the level of stress or 'stiffness' induced at the cutting and back edges of the blade by compressing the blade along the inner zone
- Dressing** involves cleaning or shaving the top surface of the grinding wheel to remove the build up of old sharpening metal and coolant and dull abrasive grains
- Geometry**
- is the tooth pitch and the tooth angles that a blade is sharpened at
 - must match the type and characteristics of the material being sawn
- Machine feed**
- is the speed at which the abrasive wheel on the sharpening machine or grinder moves in and out of the tooth profiles
 - rates are generally measured in teeth per minute
- Pre start-up checks** are conducted to ensure:
- machine has been set-up correctly
 - systems are performing accurately
 - machine is operating to optimum performance
- Testing** is the process of assessing a tooth after machine settings and grinding has been undertaken to check pitch and angle of the sharpening process
- Profile**
- is the shape or outline of the teeth designed to suit the characteristics of the materials being sawn

RANGE STATEMENT

- changes in line with sawing speeds, saw blade specifications, the material being sawn and direction of the sawing process
- Disposing of** may include:
- recycling band saw blades that cannot be sharpened or are damaged in the process
 - re-using band saw blades that cannot be sharpened or are damaged in the process
- Records and reports** may include:
- the blade type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3208B Sharpen circular saws

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assess the circular saw condition, set up for sharpening and sharpen the saw with a manually controlled grinder

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3208A Sharpen circular saws

Application of the Unit

Application of the unit

The unit involves sharpening circular saws in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for sharpening	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>sharpening</i> circular saws are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Sharpening process is planned in line with site procedures and environmental requirements</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Assess condition and set up sharpening equipment	<p>2.1. <i>Cutting performance</i> of <i>blade</i> is assessed for sharpening requirements and blade replacement is reviewed in line with site requirements</p> <p>2.2. Condition of <i>teeth, set, straightness</i> of blade and prior repairs are assessed for suitability to site requirements</p> <p>2.3. Sharpening machine with suitable wheel diameter</p>

ELEMENT	PERFORMANCE CRITERIA
3. Sharpen circular saw blade	<p>and thickness is selected and grinding wheel changed, profiled or <i>dressed</i></p> <p>2.4. Machine settings are adjusted to suit required tooth profile <i>geometry</i>, blade set or kerf, blade thickness and diameter to manufacturer's recommendations</p> <p>2.5. Saw is set up in grinder with appropriate attachments for tooth <i>pitch</i></p> <p>3.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>3.2. Teeth <i>face</i> and <i>gullet</i> are ground to achieve the required sharpness and surface finish</p> <p>3.3. Tooth <i>profile</i> is maintained to industry standards</p> <p>3.4. Variations in tooth height are kept within industry or manufacturer tolerances for <i>concentricity</i></p> <p>3.5. Hand feeds of wheel and saw are controlled to minimise wear, avoid burn marks and maintain a smooth surface finish on all surfaces</p> <p>3.6. Circular saws that cannot be sharpened or are damaged in the sharpening process are <i>disposed of</i> in line with site procedures, manufacturer's recommendations and environmental requirements</p> <p>3.7. Sharpening and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely sharpen circular saws
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and

REQUIRED SKILLS AND KNOWLEDGE

demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sharpening circular saws
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sharpening circular saws
- Environmental risks and hazards
- Characteristics of circular saw blades
- Sharpening methods and geometry
- Teeth setting methods
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently sharpen circular saws within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to sharpening circular saws
 - following organisational policies and procedures relevant to sharpening circular saws
 - sharpening circular saws in line with the work order and within prescribed organisational requirements
 - removing and replacing circular saw blades from equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding

RANGE STATEMENT

Environmental requirements
may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Sharpening is to include:

- the amount of material removed from the tooth profile
- the ability to produce the required profile
- the speed at which the abrasive wheel can remove material without affecting steel characteristics
- the quality of surface texture left by the abrasive wheel along the entire profile and at

RANGE STATEMENT

- Work order** is to include:
- the intersection of all cutting edge angles
 - instructions for the sharpening of circular saw blades in designated equipment
- and may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** may include:
- gulleting and grinding machines
 - machine attachments
 - hand-held tools
 - abrasive wheels
- and is to include:
- procedures for equipment lock-out, i.e. protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Cutting performance** is to include:
- saw performance balanced against achievement of required production time
 - degree of deviation in the range of sawn products
- Blades** may include:
- circular cross cut blades used for cutting timber products
 - rip saw blades used for cutting timber

RANGE STATEMENT

	products
Teeth are to include:	<ul style="list-style-type: none">• sharpness of tooth cutting edges• angles containing within the tooth profile• tooth strength• damage to teeth• pitch• depth• and number of teeth per metre
Set	<ul style="list-style-type: none">• is the distance cutting edge points extend from the blade surface (or plane) to provide the blade clearance from the material being sawn• in wide bandsaw blades is achieved by swaging and shaping, or tipping tooth points• in narrow bandsaw blades applied to, for example, alternate spring set and wave set to provide clearance
Straightness	is the assessment of blade level and flatness against a straight edge or plumb line when blade is in a vertical position
Dressing	involves cleaning or shaving the top surface of the grinding wheel to remove the build up of old sharpening metal and coolant and dull abrasive grains
Geometry	<ul style="list-style-type: none">• is the tooth pitch and the tooth angles that a blade is sharpened at• must match the type and characteristics of the material being sawn
Pitch	is the distance between the tips of the teeth on the saw blade
Pre start-up checks	are conducted to ensure: <ul style="list-style-type: none">• machine has been set-up correctly• systems are performing accurately• machinery is operating to optimum performance
Face	<ul style="list-style-type: none">• is the front of a tooth along which the angle of hook or rake is measured• on square ground rip saws, the tooth face is parallel to the surface of the material being sawn

RANGE STATEMENT

Gullet	is the hollow area between tooth points
Profile	<ul style="list-style-type: none"> • is the shape or outline of the teeth designed to suit the characteristics of the materials being sawn • changes in line with sawing speeds, saw blade specifications, the material being sawn and the direction of the sawing process
Concentricity	<ul style="list-style-type: none"> • is sharpening blades so that each tooth point on a round saw is at the same radius from the centre of the saw blade • is critical to prevention of blade vibration - when tooth points are at different radii from the blade centre the saw is 'out-of round' or non-concentric
Disposing of may include:	<ul style="list-style-type: none"> • recycling circular saws that cannot be sharpened or are damaged in the process • re-using circular saws that cannot be sharpened or are damaged in the process
Records and reports may include:	<ul style="list-style-type: none"> • the blade type • size • inspection • grading and labelling outcomes • storage locations • quality outcomes • hazards • incidents • equipment malfunctions <p>and may be:</p> <ul style="list-style-type: none"> • manual • using a computer-based system another appropriate organisational communication system

Unit Sector(s)

Unit sector	No sector assigned
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Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3209B Align sawing production systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to align canter rings and chipper heads for wood chipping equipment, which are used for both primary and secondary processing of solid wood products. The unit includes checking equipment and shutdown procedures

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3209A Align sawing production systems

Application of the Unit

Application of the unit

The unit involves aligning sawing production systems in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|--|
| 1. Conduct shut down | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to aligning sawing production systems are identified and followed</p> <p>1.2. Mechanical and safety components are removed, replaced and temporarily stored to provide access to alignment parts</p> <p>1.3. Guides are removed, replaced and temporarily located in a safe manner</p> <p>1.4. Work area is kept clear of dust, off-cuts and debris in line with OHS requirements</p> |
| 2. Prepare for aligning | <p>2.1. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>2.2. Type of <i>canter rings</i> and <i>chipper heads</i> to be <i>aligned</i> are removed from the designated machinery</p> <p>2.3. <i>Equipment</i> is selected appropriate to work</p> |

ELEMENT**PERFORMANCE CRITERIA**

	requirements and checked for operational effectiveness in line with manufacturer's recommendations
	2.4. Aligning process is planned in line with site procedures
	2.5. <i>Communication</i> with others is established and maintained in line with OHS requirements
3. Align rings and heads	3.1. <i>Equipment history</i> and records are accessed and interpreted
	3.2. Manufacturer's data and alignment instructions are obtained and interpreted
	3.3. <i>Performance</i> of rings and heads are assessed for alignment requirements
	3.4. Alignment procedure is conducted in a sequential manner in line with manufacturer's instructions
	3.5. Saw is checked for alignment and free operation
	3.6. Aligning process and equipment faults are <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely align canter rings and chipper heads
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of

REQUIRED SKILLS AND KNOWLEDGE

- processes for aligning sawing production systems
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for aligning sawing production systems
- Environmental risks and hazards
- Mechanical characteristics of sawing machines, chippers/canters and feed systems including line bars and carriages
- Equipment shutdown processes
- Alignment methods and settings
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently align canter rings and chipper heads within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to aligning sawing production systems
- following organisational policies and procedures

EVIDENCE GUIDE

- relevant to aligning sawing production systems
 - aligning canter rings and chipper heads in line with the work order and within prescribed organisational requirements
 - removing and replacing canter rings and chipper heads from equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures

Environmental requirements
may include:

RANGE STATEMENT

Legislative requirements:

- workplace practices
- are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the alignment of canter rings and chipper heads in designated equipment

and may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers

RANGE STATEMENT

- clients
- colleagues
- managers

Canter rings

are parts associated with the movement of logs to the chipper

Chipper heads

are the cutting component of the log chipping equipment

Alignment

is the process of positioning various parts of sawing systems in relation to each other in order to:

- reduce sawing deviation, vibration, and downtime
- increase production rates
- improve quality of sawn finish

Equipment may include:

- tools for removing and adjusting mechanical parts
- special jigs and precision measuring equipment
- laser equipment
- surveying instruments
- portable electrical lighting
- feeler gauges
- engineers rules
- vernier callipers
- micrometers
- plumb lines
- piano wire or string lines
- pointer
- markers
- portable computers that re-calibrate machine settings

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences

RANGE STATEMENT

- control of tone of voice
 - body language
- Equipment history** is to include:
- log of previous alignment measurements, settings, adjustments and timelines
- Performance** is to include:
- assessing sawing machine and system performance against recovery percentages, product sizing and/or standard deviation
- Records and reports** may include:
- performance
 - adjustment
 - historic records
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3210B File and set saws

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to position blades in jigs or vices, produce bevels along the back clearance angles of teeth, check blade clearance requirements and set teeth to site requirements

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3210A File and set saws

Application of the Unit

Application of the unit

The unit involves filing and setting saws in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------|--|
| 1. Prepare for saw setting | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to filing and <i>setting saws</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Setting process is planned in line with site procedures</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Set saw | <p>2.1. Saw is set up in a selected <i>jig</i> to allow setting work to be conducted</p> <p>2.2. <i>Kerf</i> and finish requirements are checked to suit horsepower of the machine, the type of saw and cutting conditions</p> <p>2.3. Individual teeth are examined to check amount of</p> |

ELEMENT**PERFORMANCE CRITERIA**

- setting required
- 2.4. *Condition of welding, saw temper* and consistency of set between alternate teeth are maintained by setting
 - 2.5. Teeth are measured and assessed for the correct *setting placement* in line with site procedures
 - 2.6. Teeth are *bevelled* and *bevel* length is assessed in line with site procedures
 - 2.7. Set is applied to teeth requiring resetting allowing for estimated *spring back*
 - 2.8. Set of teeth is checked using gauges in line with site procedures
 - 2.9. Saw setting process and equipment faults are investigated and *recorded and reported* in line with site requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely set saws and produce bevels across back clearance angles on saw teeth
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for filing and setting saws
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

material

- Organisational and site standards, requirements, policies and procedures for filing and setting saws
- Environmental risks and hazards
- Characteristics of metal and saws
- Setting methods and geometry
- Saw condition assessment
- Geometric requirements of bevels
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently set saws within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to filing and setting saws
- following organisational policies and procedures relevant to filing and setting saws
- bevelling teeth and assessing bevel lengths, widths, angles, and surface texture, in line with standard operating procedures and site production

EVIDENCE GUIDE

- requirements
- removing and replacing saws from equipment
 - setting teeth and assessing conditions in line with standard operating procedures
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Setting

- is the angle the teeth are bent providing clearance to prevent the blade jamming during the cutting operation
- is most commonly associated with alternate left and right bending of teeth found on hand saws and solid tooth spring set saw blades

Saws may include:

- hand saws
- band saws
- circular saws (all types)
- gang saws

and are to include:

- procedures for equipment lock-out, i.e.

RANGE STATEMENT

- protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Work order** is to include:
- instructions for the setting of saws in designated equipment
- and may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** may include:
- setting instruments such as levers and gauges, automatic or hand-held grinders, jigs and vices
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Jig** is a device which secures the saw while setting takes place
- Kerf** is the width of the cut in timber caused by each tooth being tilted in opposing directions creating a cut wider than the thickness of the blade
- Condition of welding and saw temper** is to include:
- assessing the blade and the teeth for existing repairs resulting in welding which may have cracked or moved
 - hardness of the blade as excessive heat during cutting may alter the temper
- Setting placement** is to include:
- assessing the blade and the teeth for existing repairs and possible weaknesses resulting

RANGE STATEMENT

from previous welding or cracking, or damage caused through stress of bending teeth

Bevelled

is the process of filing saw teeth to a bevel to allow for better clearance during cutting operations

Bevels

- are the flat sections produced along the back clearance angles of saw teeth
- can be single or double (e.g. hogged, roof top and triple chip teeth)
- can be produced through hand filing or grinding

Spring back

- involves considering and allowing for the fact that metal has some memory and will want to move back to its original position
- effects can be compensated, depending on the period between maintenance and saw blade operation

Records and reports may include:

- saw setting
- inspection
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3211B Recondition guides

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to review, adjust, grind or machine and replace saw guides in band saws and gang saws assuring smooth and straight running

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3211A Recondition guides

Application of the Unit

Application of the unit The unit involves reconditioning guides in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------|--|
| 1. Prepare for reconditioning | <ul style="list-style-type: none"> 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to reconditioning guides are identified and followed 1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> 1.3. Type of <i>guides</i> to be <i>reconditioned</i> are removed from the designated machinery 1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Reconditioning process is planned in line with site procedures and environmental requirements 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Machine guides | <ul style="list-style-type: none"> 2.1. Condition of saw guides is reviewed to assess guide wear available after <i>grinding</i> 2.2. Attachments for holding guides flat while grinding or <i>machining</i> are selected 2.3. Machining equipment is set up in position to |

ELEMENT**PERFORMANCE CRITERIA**

- conduct reconditioning
- 2.4. Tooling is examined and *dressed* or *sharpened* in line with site procedures and OHS requirements
- 2.5. *Scored material* is removed from guide by grinding or machining
- 2.6. Grinding or machining *speeds and feeds* are selected to avoid burn marks on guides and to optimise wheel or tool wear
- 2.7. Guides are reconditioned to meet *geometric* requirements of sawing equipment
- 2.8. Guides that cannot be reconditioned are segregated and *disposed of* in line with site procedures, manufacturer's recommendations and environmental requirements
- 2.9. Guide reconditioning process and equipment faults are investigated, *recorded and reported* in line with site requirements
3. Remove, adjust and replace guides
- 3.1. Worn guides are removed from *carrier* without component damage
- 3.2. Replacement guides are selected which follow manufacturer's requirements
- 3.3. Fastening holes are drilled and surfaces around drill holes cleaned up
- 3.4. New guides are inserted in carrier at correct position and required *tolerance* without component damage
- 3.5. Low stock and shortages of new guides or guide material are identified in line with site procedures
- 3.6. Guides are adjusted to *clearance* in line with manufacturer's recommendations
- 3.7. Clearance and guide security are checked before saw is started

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and

REQUIRED SKILLS AND KNOWLEDGE

equipment; efficiently and safely recondition guides

- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for reconditioning guides
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for reconditioning guides
- Environmental risks and hazards
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Characteristics of metal and saw guides
- Reconditioning methods and geometry
- Guide condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

EVIDENCE GUIDE

Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently recondition guides within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to reconditioning guides
- following organisational policies and procedures relevant to reconditioning guides
- reconditioning guides in line with the work order and within prescribed organisational requirements
- removing and replacing saw guides from equipment
- assessing the condition of guides in line with standard operating procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks,

EVIDENCE GUIDE

with questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage

RANGE STATEMENT

- requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - instructions for reconditioning guides in designated equipment
- Work order** is to include:
- and may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Guides** are alloys secured to a carrier which provide straightness and smooth running of the blade by supporting it, not allowing it to move too far to the left, right or back
- Reconditioning** is to include:
- grinding the guide surface to restore it to a smooth flat surface
 - machining the guide surface to restore it to a smooth flat surface
- Equipment** may include:
- grinding equipment
 - metal lathes
 - milling machines
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Grinding** is the process of removing metal to restore a metal surface using grinding equipment

RANGE STATEMENT

Machining	is the process of removing metal to restore a metal surface using metal lathes or milling machines
Dressing	is the process of cleaning or shaving the top surface of the grinding wheel to remove the build up of old sharpening metal and coolant
Sharpening	is the process of grinding and honing the cutting bits in metal lathes or milling machines
Scored material is to include:	guides which are deeply scratched or scraped by: <ul style="list-style-type: none">• irregular running of the blade• poor operation of the saw• blunt or un-tensioned blade
Speeds and feeds	<ul style="list-style-type: none">• is the speed the grinding wheel rotates or machine cuts at, too fast and it may burn the metal, too slow and it may produce a rough finish or grab the guide• power feed controls movement of the guide to the desired rate
Geometry	is the pitch and angle that a guide is ground or sharpened at, allowing for the material being reconditioned
Disposing of may include:	<ul style="list-style-type: none">• recycling guides that cannot be reconditioned• re-using guides that cannot be reconditioned
Records and reports may include:	<ul style="list-style-type: none">• reconditioning• inspection• storage locations• quality outcomes• hazards• incidents• equipment malfunctions and may be: <ul style="list-style-type: none">• manual• using a computer-based system or another appropriate organisational communication system
Carrier	is the saw attachment which holds the guide in place by the saw blade
Tolerance	is the amount of space between the back of the

RANGE STATEMENT

blade and the guide to avoid the blade striking the guide

Clearance

is the amount of space allowed for left and right movement

Unit Sector(s)**Unit sector**

No sector assigned

Co-requisite units**Co-requisite units****Competency field****Competency field**

Sawmilling and Processing

FPISAW3212B Sharpen tipped circular saws

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to assess the tipped circular saw condition, set up for sharpening and sharpen the saw with an automated grinder

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3212A Sharpen tipped circular saws

Application of the Unit

Application of the unit The unit involves sharpening tipped circular saws in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for sharpening	1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to sharpening tipped circular saws are identified and followed 1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> 1.3. <i>Tipped circular saw blades</i> to be <i>sharpened</i> are removed or appropriate equipment fitted to allow saw to be sharpened in machinery 1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Sharpening process is planned in line with site procedures and environmental requirements 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements
2. Assess condition and set up sharpening equipment	2.1. <i>Cutting performance</i> of blade is assessed for sharpening requirements and blade replacement reviewed in line with site requirements

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|--------------------------------------|---|
| 3. Sharpen tipped circular saw blade | <p>2.2. Condition of <i>teeth</i>, <i>straightness</i> of blade and prior repairs are assessed for suitability to site requirements</p> <p>2.3. Sharpening machine with suitable wheel diameter is selected and grinding wheel changed or <i>dressed</i></p> <p>2.4. Machine settings are adjusted to suit required blade <i>geometry</i> and blade set to manufacturer's recommendations</p> <p>2.5. Saw is set up in grinder or grinder set up on saw while in machine to ensure tooth <i>profile</i> and geometry are maintained</p> <p>3.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>3.2. Grinding <i>coolant</i> system is prepared in line with site requirements</p> <p>3.3. Saw and grinding wheel angles, <i>speeds and feeds</i> are selected to suit saw</p> <p>3.4. Teeth <i>face</i> and <i>gullet</i> are ground to achieve the sharpened finish requested and to maintain original profile</p> <p>3.5. Tooth profile and <i>pitch</i> are maintained to industry standards</p> <p>3.6. Variations in tooth height and depth of cut are brought within industry tolerances for <i>concentricity</i></p> <p>3.7. Feeds of wheel and saw are set to minimise wear and to avoid burn marks</p> <p>3.8. Tipped circular saws that cannot be sharpened or are damaged in the sharpening process and cannot be repaired are <i>disposed of</i> in line with site procedures, manufacturer's recommendations and environmental requirements</p> <p>3.9. Sharpening and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p> |
|--------------------------------------|---|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely sharpen tipped circular saws
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sharpening tipped circular saws
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sharpening tipped circular saws
- Environmental risks and hazards
- Characteristics of tipped circular saw blades
- Sharpening methods and geometry
- Teeth settings methods
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently sharpen tipped circular saws within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to sharpening tipped circular saws
- following organisational policies and procedures relevant to sharpening tipped circular saws
- sharpening tipped circular saws in line with the work order and within prescribed organisational requirements
- removing and replacing tipped circular saw blades from equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage

RANGE STATEMENT

- requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Saws** may include:
- circular saws
 - hot saws
 - cold saws
- Work order** is to include:
- instructions for the sharpening of tipped circular saw blades in designated equipment
- and may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Tipped circular saw blades** may include:
- tipped circular saw blades used for cutting timber
- and tips may include:
- tungsten carbide
 - satellite
 - other alloyed materials such as high speed steel
- Sharpening** is to include:
- face
 - gullet
 - pitch
 - profile
 - angle
 - depth of cut
 - speed the blade passes over the grinding wheel to obtain a sharp edge
- Equipment** may include:
- manually or automatically adjustable grinding machines
 - abrasive wheels
 - measuring tools equipment
- and is to include:

RANGE STATEMENT

- procedures for equipment lock-out, i.e. protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Cutting performance** may include:
- length of production time achieved by the blade
 - whether the blade performed with site tolerances of allowable deviation
 - whether the surface finish was in line with site quality requirements
- Teeth** are to include:
- sharpness of each tooth
 - damage to teeth
 - pitch
 - number of teeth per metre
- Straightness** is assessment of the entire blade to ensure it has not bent out of shape or warped in any way
- Dressing** is the process of cleaning or shaving the top surface of the grinding wheel to remove the build up of old sharpening metal and coolant
- Geometry** is the pitch and angle that a blade is sharpened at, allowing for the material they will be cutting
- Profile**
- is the shape of the teeth in line with the timber being cut
 - usual direction of cutting, crosscut across the grain and ripping with the grain
- Pre start-up checks** are conducted to ensure:
- machine has been set-up correctly
 - systems are performing accurately

RANGE STATEMENT

- machinery is operating to optimum performance
- Coolant** is used in conjunction with grinding operations to cool the metal blade as it generates heat from the sharpening process to prevent burning
- Speeds and feeds**
- is the speed the grinding wheel rotates at, too fast and it may burn the metal, too slow and it may produce a rough finish or grab the blade
 - similarly, the power feed controls movement of the blade to the desired rate
- Face** is to include:
- front edge of each tooth
 - cutting part of the tooth
- Gullet** is the bottom hollowed section between each tooth
- Pitch** is the distance between the tips of the teeth on the saw blade
- Concentricity** is ensuring all teeth are at the same radius from the saw blade centre and that one tip is not higher than another
- Disposing of** may include:
- recycling tipped circular saws that cannot be sharpened or cannot be repaired
 - re-using tipped circular saws that cannot be sharpened or cannot be repaired
- Records and reports** may include:
- the blade type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3213B Level and tension circular saws

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to level and tension circular saws and includes inspecting saws, repairing defects such as dished blades, damaged teeth and cracks, levelling ridges and lumps, and tensioning the saw

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3213A Level and tension circular saws

Application of the Unit

Application of the unit

The unit involves levelling and tensioning circular saws in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for repair	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to levelling and tensioning circular saws are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Levelling and tensioning process is planned in line with site procedures and environmental requirements</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Assess saw condition	<p>2.1. Saws are handled safely without damage to teeth</p> <p>2.2. Foreign material built up on saw surfaces is cleaned for inspection</p> <p>2.3. Saw is inspected to assess condition of teeth and saw plate</p> <p>2.4. Saw is declared unserviceable where hazardous</p>

ELEMENT	PERFORMANCE CRITERIA
	defects are found
	2.5. Unserviceable saws are segregated and disposed of in line with site procedures, manufacturer's requirements and environmental requirements
3. Level saw	3.1. Radial and circular ridges or lumps are assessed and matched on both sides of the blade
	3.2. Gauges and straight edges are used in both radial and circular directions and monitored for accuracy
	3.3. Ridges or lumps are progressively removed through levelling, the use of structure rolls or levelling rolls to achieve flatness
	3.4. Hammering and rolling patterns are controlled to reduce internal blade stresses to avoid spring-back and re-occurrence of defects
4. Tension saw	4.1. Consistency of blade curvature is assessed with a straight edge or tension gauge
	4.2. Tension requirements are determined from assessment of curvature consistency and curvature required for site production requirements
	4.3. Blade is tensioned using appropriate tools and equipment in line with required standard
	4.4. Final checks are made to ensure tension amount, distribution, placement and level in line with site production requirements
	4.5. Saws damaged in the levelling and tensioning process are repaired/sent for repair and those that cannot be repaired are disposed of in line with site procedures, manufacturer's recommendations and environmental requirements
	4.6. Levelling and tensioning process and equipment faults are investigated, recorded and reported in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

REQUIRED SKILLS AND KNOWLEDGE

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely level and tension circular saws
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for levelling and tensioning circular saws
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for levelling and tensioning circular saws
- Environmental risks and hazards
- Characteristics of metal and saws
- Levelling and tensioning methods
- Saw condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently level and tension circular saws within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to levelling and tensioning circular saws
- following organisational policies and procedures relevant to levelling and tensioning circular saws
- levelling and tensioning circular saws in line with work order and within prescribed organisational requirements
- removing and replacing circular saws from equipment
- assessing circular saw conditions in line with standard operating procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

RANGE STATEMENT

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements

RANGE STATEMENT

- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Levelling

is the process of removing lumps and ridges in the blade using the appropriate and specialised saw hammers

Tensioning

is the process of placing tension in a blade to counteract forces and rotational stresses

Work order is to include:

- instructions for the levelling and tensioning of circular saws in designated equipment

and may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- hammers
- stretcher rolls
- specialised levelling rolls
- tensioning instruments
- gauges and straight edges to check accuracy of hammering or rolling processes on particular sections of the saw blade

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

RANGE STATEMENT

Disposing of may include:

- recycling unserviceable saws/saws damaged in the levelling and tensioning process that cannot be repaired
- re-using unserviceable saws/saws damaged in the levelling and tensioning process that cannot be repaired

Radial and circular ridges or lumps are to include:

- defects obtained during saw operation

Gauges and straight edges are to include:

- measuring instruments used to check the results of hammering and/or rolling the blade

Stretcher and levelling rolls are to include:

- devices for assisting in the process of removing saw defects such as ridges and lumps

Patterns

are the sequences applied when hammering or rolling identified areas of the blade to remove distortions and stresses in the form of lumps, ridges, twists, loose, tight, or neutral sections

Spring-back

is the principle of compensating for 'metal creep' that causes saw blade steel to stress-relieve over time thus reducing tension permanence in blades

Curvature

is the amount of tension achieved in a blade by compressing and elongating predetermined sections or zones in the blade

Records and reports may include:

- levelling and tensioning
- inspection
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3214B Join band saw blades

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assess the band saw blade condition, to prepare and weld meeting ends and to finish the welded surface ready for operation

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3214A Join band saw blades

Application of the Unit

Application of the unit

The unit involves joining band saw blades in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------------|--|
| 1. Prepare for joining | <p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to joining band saw blades are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Band saw <i>blades</i> to be <i>joined</i> are removed from the designated machinery</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Joining process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Join or repair band saw blade | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Saw blank</i> is obtained and cut to length or the existing blade cut at the <i>weld defect</i></p> <p>2.3. <i>Ends</i> are trimmed to obtain correct back alignment</p> |

ELEMENT**PERFORMANCE CRITERIA**

- and pitch and/or shaped to assist metal penetration
- 2.4. Ends are set up in the *welder to tolerances* specified by the manufacturer
 - 2.5. Weld is applied to ensure metal penetration through thickness of the blade and protected from accidental contact
 - 2.6. Surplus weld material is ground from blade without *burning* or *annealing* the metal
 - 2.7. Blade is *finished* to eliminate bumps in blade surface
 - 2.8. Sub-standard joined/repared band saw blades and band saw blades damaged during the join/repair process are segregated and *disposed of* in line with site procedures, manufacturer's recommendations and environmental requirements
 - 2.9. Band saw is packaged for protection during return to service
 - 2.10. Joining process and equipment faults are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely join band saw blades
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of

REQUIRED SKILLS AND KNOWLEDGE

- processes for joining band saw blades
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for joining band saw blades
- Environmental risks and hazards
- Characteristics of band saw blades
- Joining methods
- Band saw welding procedures
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently join band saw blades within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to joining band saw blades
- following organisational policies and procedures relevant to joining band saw blades

EVIDENCE GUIDE

Context of and specific resources for assessment

- joining band saw blades in line with the work order and within prescribed organisational requirements
- removing and replacing band saw blades from equipment
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements may include:

Work order is to include:

- instructions for the joining of band saw blades in designated equipment

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- supervisors
- suppliers
- clients
- colleagues
- managers

Appropriate personnel may include:

RANGE STATEMENT

Blades may include:

- narrow and wide band saws blades that cut both ferrous and non-ferrous materials
- frame or 'gangsaw' blades
- other blades that require joins that alter blade length

Joining

is the process of using welding equipment that fuses together the two ends of a saw blade to form a continuous loop or alter the total length of a blade to suit machine design requirements

Equipment may include:

- specialised band saw welding plant
- GMAW
- GTAW
- MMAW
- oxyacetylene equipment
- grinding and finishing equipment
- hand or power operated tools

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Saw blank

is a new fully toothed band saw blade or ribbon of steel which is yet to be joined to form a loop

Weld defects

are any features produced in the weld zone or weld deposit that have the effect of weakening the weld zone or deposit

Ends

are the ends of the blank or the ends of the existing blade being rejoined at either the crack or

RANGE STATEMENT

	the previous joining point
Welder	refer to equipment
Tolerances	are the spacing between the ends when welding, allowing for penetration of the weld to occur
Burning is to include:	is the overheating of the weld deposit and saw steel during removal of the weld bead to a point that has an effect of weakening the strength of the weld or join
Annealing	<ul style="list-style-type: none">• is the process of post heating the heat affected weld zone to the recommended temperature range and allowing slow cooling of the post-heated zones• can be done manually or by specialised equipment
Finishing	is the process of: <ul style="list-style-type: none">• removing all distortions from the blade surface• tensioning the weld zone (where applicable)• adjusting back length of the blade (where applicable)• cleaning welded zone to enterprise standard
Disposing of may include:	<ul style="list-style-type: none">• recycling sub-standard joined/repared band saw blades and band saw blades damaged during the join/repair process• re-using sub-standard joined/repared band saw blades and band saw blades damaged during the join/repair process
Records and reports may include:	<ul style="list-style-type: none">• the blade type• welding technique• size• inspection• grading and labelling outcomes• storage locations• quality outcomes• hazards• incidents• equipment malfunctions
	and may be:

RANGE STATEMENT

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3215B Screen wood chips

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate the screening process and to screen wood chips for species, size and defects

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3215A Screen wood chips

Application of the Unit

Application of the unit

The unit involves screening wood chips in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for screening	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to screening wood chips are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>wood chips</i> to be <i>screened</i> are acquired from the production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Screening process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Screen wood chips	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Machines and <i>feed systems</i> are started and adjusted to screen wood chip size in line with organisational requirements</p>

ELEMENT**PERFORMANCE CRITERIA**

- 2.3. Coarse and fine screens are regularly raked and cleared to *remove* oversized material in line with standard operating procedures and environmental requirements
- 2.4. Screening is regularly sampled and analysed to ensure wood chips conform to quality specifications and organisational requirements
- 2.5. Wood chips that do not conform to quality specifications and organisational requirements are segregated and *disposed of* in line with site procedures and environmental requirements
- 2.6. Screening is continually monitored for matter which may cause *contamination*
- 2.7. Conveyor operations are monitored and jams cleared to ensure free flow of output material to transfer systems
- 2.8. Screening process and equipment faults are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely screen wood chips
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for screening wood chips

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for screening wood chips
- Environmental risks and hazards
- Wood chip screening techniques and assessment
- Characteristics of wood chips and stock levels
- Chip production process
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently screen wood chips within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to screening wood chips
- following organisational policies and procedures relevant to screening wood chips

EVIDENCE GUIDE

- screening wood chips in line with the work order and within prescribed organisational requirements
 - directing wood chips to the transfer process in line with organisational requirements and OHS regulations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate

EVIDENCE GUIDE

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the screening of chips and the chip size

and may include:

- feed rate
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may

- supervisors

RANGE STATEMENT

include:

- suppliers
- clients
- colleagues
- managers

Wood chips

are the output product of converting wood into chip material which is then used to produce other products

Screening

is the process of sorting wood chips into categories of species, size, moisture content and contamination issues associated with selected wood such as logs, billets, off-cuts, waste timber, down grade timber, residue, chips or reject boards

Equipment may include:

- mechanical
- automated
- digitised
- computer assisted screening systems
- mechanised feed systems

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Feed systems may include:

- conveyors, chutes or track systems moving

RANGE STATEMENT

- processed wood chips from the chipping machines to the screening system
- Removal** may include:
- recycling oversized material
 - re-using oversized material
- Disposing of** may include:
- recycling wood chips that do not conform to quality specifications and organisational requirements
 - re-using wood chips that do not conform to quality specifications and organisational requirements
- Contamination** may include:
- bark
 - charcoal
 - rock and metal
 - process of moving wood chips to the screening system and from the screening system to the transfer process
- Records and reports** may include:
- product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3216B Transfer wood chips

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate the transfer process and transfer wood chips to stockpile or transport systems

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3216A Transfer wood chips

Application of the Unit

Application of the unit

The unit involves transferring wood chips in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to transfer wood chips	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to transferring wood chips are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>wood chips</i> to be <i>transferred</i> are acquired from the production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Transferral process is planned in line with site procedures and environmental requirements and deposit point inspected for access and cleanliness</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Transfer wood chips	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Machines and <i>feed systems</i> are started and adjusted to transfer wood chip to the <i>stockpile</i> or <i>transport</i> in</p>

ELEMENT**PERFORMANCE CRITERIA**

- line with organisational requirements
- 2.3. *Conveyor operations* are monitored and jams cleared to ensure free flow of output material to transfer systems
- 2.4. Wood chips are transferred using a *chip slinger* or *air blower* in line with site requirements and transfer specifications
- 2.5. Slinger or blower is manoeuvred to enable filling or distribution over the required area
- 2.6. Filling or distribution levels are checked and stopped or topped up in line with work order and capacity
- 2.7. Transfer process and equipment faults are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely transfer wood chips
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for transferring wood chips
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

transferring wood chips

- Environmental risks and hazards
- Wood chip transfer techniques
- Characteristics of wood chips and stock levels
- Chip supply processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently transfer wood chips within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to transferring wood chips
- following organisational policies and procedures relevant to transferring wood chips
- transferring wood chips in line with the work order and within prescribed organisational requirements
- directing wood chips to the transport arrangements and stockpiles in line with organisational

EVIDENCE GUIDE

Context of and specific resources for assessment

requirements and OHS regulations

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

RANGE STATEMENT

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the transfer of chips
- and may include:
- location
 - transport mode
 - feed rate
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues

RANGE STATEMENT

- managers
- Wood chips** are the output product of converting wood into chip material which is then used to produce other products
- Transferral** is to include: the movement of wood chips to stockpiles or transport arrangements using:
- chip slingers
 - air blowers
- Equipment** may include:
- chip slingers
 - air blowers
 - mechanised feed systems
- and is to include:
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Pre start-up checks** are conducted to ensure:
- equipment has been set-up correctly
 - systems are performing accurately
 - equipment is operating to optimum performance
- Feed systems** may include:
- conveyors moving processed wood chips from the screening system to the transfer process
 - chutes or track systems moving processed wood chips from the screening system to the transfer process
- Stockpile** is the large pile of processed wood chips ready for distribution or further down-stream processing

RANGE STATEMENT

Transport may include:

- ships
- trains
- trucks

Conveyor operation

is the process of moving wood chips to the transfer process and from the screening system

Chip slinger

is equipment which manoeuvres chips to the stockpile or transport

Air blower

is equipment which pumps wood chips to the stockpile or transport

Records and reports may include:

- stockpile allocation
- transport allocation
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assignment

Co-requisite units

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3217B Hard face saw teeth

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to set the hard face machine and hard face the teeth of a saw

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3217A Hard face saw teeth

Application of the Unit

Application of the unit

The unit involves hard facing saw teeth in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to hard face saw teeth	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to hard facing saw teeth are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Hard facing process is planned in line with site procedures and environmental requirements</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Hard face saw teeth	<p>2.1. <i>Material stock</i> to be used for hard facing is selected and set up in the machine following manufacturer's recommendations</p> <p>2.2. Saw is set up in machine and adjustments made to machine <i>variables</i> to suit saw and material in line with manufacturer's recommendations</p> <p>2.3. Individual teeth are aligned to machine tip to ensure hard facing is applied to cutting surfaces</p> <p>2.4. Machine is operated and adjusted for variables to</p>

ELEMENT**PERFORMANCE CRITERIA**

- ensure material cohesion
- 2.5. Completed facing is checked against specifications
- 2.6. Hard facing process and equipment faults are investigated, *recorded and reported* in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely hard face saw teeth
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for hard facing saw teeth
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for hard facing saw teeth
- Environmental risks and hazards
- Characteristics of metal and saws
- Hard facing methods
- Saw condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques

REQUIRED SKILLS AND KNOWLEDGE

- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently hard face saw teeth within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to hard facing saw teeth
- following organisational policies and procedures relevant to hard facing saw teeth
- hard facing saw teeth in line with the work order and within prescribed organisational requirements
- removing and replacing saws from equipment
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements

Context of and specific resources for assessment

EVIDENCE GUIDE

Method of assessment

- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Hard facing

is the process of cohering a hard metal substance (the face) to the existing face of saw blade teeth

Saws may include:

- band saws
- circular saws (all types)
- gang saws

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Work order is to include:

- instructions for the hard facing of saw teeth in designated equipment

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- resistance welding equipment
- plasma transfer equipment

RANGE STATEMENT

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Material stock is to include:

- hard compound metal used to hard face saw teeth

Variables may include:

- pressure
- temperature
- current
- voltage
- weld time
- vacuum

Records and reports may include:

- saw teeth hard facing outcomes
- inspection
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3218B Replace tungsten tips

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to remove worn tungsten tips from saws and to braze, anneal, clean and prepare replacement tips for grinding and return to service

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3218A Replace tungsten tips

Application of the Unit

Application of the unit The unit involves replacing tungsten tips in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for replacement	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to replacing tungsten tips are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Replacement process is planned in line with site procedures and environmental requirements</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Remove worn tips	<p>2.1. <i>Saw</i> is cleaned of foreign matter and checked for defects</p> <p>2.2. Broken tips are identified and marked</p> <p>2.3. Broken tips are <i>removed</i> from seat using specified method and with minimal damage to the tooth seat and <i>disposed of</i> in line with site procedures and environmental requirements</p>

ELEMENT**PERFORMANCE CRITERIA**

3. Replace tips
- 2.4. **Tooth seats** are repaired to specified tolerance and dimensions
 - 3.1. Saw is set up in **brazing jig** in line with manufacturer's instructions
 - 3.2. **Brazing material** and technique is selected suitable for the material, application and the control of heat
 - 3.3. Replacement tip is selected to meet application specifications and brazed into position
 - 3.4. Trial weld of one tip is conducted and adjusted where necessary, to confirm weld pressure, current temperature and anneal settings against specifications
 - 3.5. Trial weld is included in replacement process or where weld is sub-standard, material is segregated and disposed of in line with site procedures and environmental requirements
 - 3.6. Manual or automatic feeds are set in line with the number of tips to be welded
 - 3.7. Tip replacement is carried out regularly, checking and adjusting **annealing** process temperatures and current to ensure staying within the specified range
 - 3.8. Surplus brazing material is removed from saw surfaces and tip faces **dressed** to prepare them for sharpening
 - 3.9. Replacement process and equipment faults are investigated, **recorded and reported** in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely replace tungsten tip
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation

REQUIRED SKILLS AND KNOWLEDGE

- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for replacing tungsten tips
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for replacing tungsten tips
- Environmental risks and hazards
- Characteristics of metal and saws
- Tungsten tip replacement methods
- Saw condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently replace tungsten tips within organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to replacing tungsten tips
- following organisational policies and procedures relevant to replacing tungsten tips
- replacing tungsten tips in line with the work order and within prescribed organisational requirements
- removing and replacing tungsten tips from equipment
- removing and assessing condition of tungsten tips in line with standard operating procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions

RANGE STATEMENT

- relating to forest fire
- manual handling including shifting, lifting and carrying
 - machine isolation and guarding
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements** may include:
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
 - legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Organisational requirements** may include:
- Tungsten tip replacement** is to include:
- the process of brazing new tungsten tips onto the tooth face or tooth seat
 - replacing tips that are broken, missing or worn out

RANGE STATEMENT**Work order** is to include:

- instructions for the replacement of tungsten tips on saws in designated equipment

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- brazing equipment
- jigs

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Saws may include:

- band saws
- circular saws (all types)
- gang saws

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Removal may include:

- melting of the brazed joint
- chipping or levering the tip off the saw

Disposing of may include:

- recycling broken tips/sub-standard trial weld
- re-using broken tips/sub-standard trial weld

Tooth seats are to include:

- the upper part of the tooth face or any recess designed for locating and positioning a tip on the tooth face

RANGE STATEMENT

- Brazing jigs** are jigs which hold the saw and tungsten tip in place securely to allow brazing to occur
- Brazing material** may include:
- silver braze (silver solder)
 - special shock absorbing shim
 - flux in the form of a liquid or paste
- Annealing** is the process of post heating the tip and/or zones behind the tip to the recommended temperature range and allowing slow cooling of the post-heated zones
- Dressing** is the process of cleaning bonded abrasive wheel faces using industry accepted methods or specialised consumables such as diamond wheel dressing sticks
- Records and reports** may include:
- tungsten tip replacement
 - inspection
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3219B Replace stellite tips

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to remove worn stellite tips from saws and to weld, anneal, clean and prepare replacement tips for grinding and return to service

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3219A Replace stellite tips

Application of the Unit

Application of the unit The unit involves replacing stellite tips in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------|---|
| 1. Prepare for replacement | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to replacing stellite tips are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Replacement process is planned in line with site procedures and environmental requirements</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Prepare tips | <p>2.1. <i>Saw</i> is cleaned of foreign matter and checked for defects</p> <p>2.2. Tips requiring replacement are measured and compared to manufacturer's <i>tolerances</i>, checked and marked</p> <p>2.3. Saw teeth are <i>prepared</i> to provide a suitable surface for replacement</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Replace tips	<p data-bbox="576 293 1308 360">2.4.Saw and tip surfaces are cleaned to provide a good contact surface for brazing or silver soldering</p> <p data-bbox="576 383 1308 450">3.1.Saw is set up in <i>welding jig</i> in line with manufacturer's instructions</p> <p data-bbox="576 461 1308 528">3.2.<i>Brazing material</i> and technique is selected suitable for the material, application and the control of heat</p> <p data-bbox="576 539 1308 651">3.3.Replacement tip is selected to meet application specifications and welded into position with tolerances checked</p> <p data-bbox="576 663 1308 775">3.4.Trial weld of one tip is conducted and adjusted where necessary, to confirm weld pressure, current temperature and anneal settings against specifications</p> <p data-bbox="576 786 1308 920">3.5.Trial weld is included in replacement process or where sub-standard, material is segregated and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p data-bbox="576 931 1308 999">3.6.Manual or automatic feeds are set in line with the number of tips to be welded</p> <p data-bbox="576 1010 1308 1122">3.7.Tip replacement is carried out regularly, checking and adjusting <i>annealing</i> process temperatures and current to ensure staying within the specified range</p> <p data-bbox="576 1133 1308 1245">3.8.Tips damaged in the replacement process are repaired/sent for repair and tips that cannot be repaired are disposed of</p> <p data-bbox="576 1256 1308 1368">3.9.Surplus brazing material is removed from saw surfaces and tip tolerances checked against specifications</p> <p data-bbox="576 1379 1308 1480">3.10. Replacement process and equipment faults are investigated, <i>recorded and reported</i> in line with site requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely replace stellite tip

REQUIRED SKILLS AND KNOWLEDGE

- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for replacing stellite tips
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for replacing stellite tips
- Environmental risks and hazards
- Characteristics of metal and saws
- Stellite tip replacement methods
- Saw condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and

EVIDENCE GUIDE

efficiently replace stellite tips within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to replacing stellite tips
- following organisational policies and procedures relevant to replacing stellite tips
- replacing stellite tips in line with the work order and within prescribed organisational requirements
- removing and replacing stellite tips from equipment
- removing and assessing condition of stellite tips in line with standard operating procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required

EVIDENCE GUIDE

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

Stellite tip replacement is to include:

- the process of welding and/or silver brazing (soldering) new or replacement stellite tips into the tooth seat
- replacing tips that are worn out
- re-building broken or damaged tips

Work order is to include:

- instructions for the replacement of stellite tips on saws in designated equipment

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- automatic or semi-automatic tipping machines
- special purpose jigs
- silver brazing equipment

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Saws may include:

- band saws
- circular saws (all types)
- gang saws

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

RANGE STATEMENT

Tolerances are to include:

- stellite weld deposits or replacement tip sizes that are large enough to allow for side dressing of cutting edges to required hook, back, tangential, and radial clearance angles

Prepare saw teeth may include:

- surface cleaning of all components critical to the welding process
- application of a solution or paste to prevent oxidisation and contamination of all welded or brazed surfaces

Welding jigs

are jigs or machines which securely hold and position saw blades and/or stellite tips to allow accuracy in brazing or welding

Brazing material may include:

- stellite rod
- silver brazing rod
- shim or ribbon
- brazing flux

Disposing of may include:

- recycling sub-standard trial weld/tips that cannot be repaired
- re-using sub-standard trial weld/tips that cannot be repaired

Annealing

- is the process of re-heating the heat affected zone behind the tip to the recommended temperature range and allowing slow cooling of the post-heated zone

Records and reports may include:

- stellite tip replacement
- inspection
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3220C Maintain wide band saw blades

Modification History

Version	Comments
Version 1.2	Data entry error in numbering of performance criteria in elements 1 and 2 corrected
Version 1.1	Updated in line with skills for sustainability review to reflect organisational environmental requirements

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to level, tension, back-gauge, weld and replace teeth on wide band saw blades

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3220B Maintain wide band saw blades. Equivalent

Application of the Unit

Application of the unit

The unit involves maintaining wide band saw blades in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------|--|
| 1. Prepare for maintenance | <ul style="list-style-type: none"> 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to maintaining wide band saw blades are identified and followed 1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> 1.3. <i>Wide band and gang saws</i> to be <i>maintained</i> are removed from the designated machinery 1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Maintenance process is planned in line with site procedures and environmental requirements 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Assess saw condition | <ul style="list-style-type: none"> 2.1. Saws are handled safely without damage to teeth 2.2. Foreign material built up on blade surfaces is cleaned for inspection |

ELEMENT**PERFORMANCE CRITERIA**

- 2.3. Saw is inspected to assess condition of teeth and saw blade
- 2.4. Teeth and tips requiring repair or replacement are checked and marked
- 2.5. Saw is declared unserviceable where hazardous defects are found and *disposed of* in line with site procedures, manufacturer's recommendations and environmental requirements
3. Level, tension and back-gauge saw blade
- 3.1. *Ridges or lumps* across and along saw are assessed and matched on both sides of the blade
- 3.2. *Gauges and straight edges* are used in both directions and monitored for accuracy
- 3.3. Ridges or lumps are progressively removed through *levelling* and the use of *stretcher rolls or levelling rolls* to achieve flatness
- 3.4. Levelling or rolling *patterns* are controlled to localise stresses to avoid spring-back and re-occurrence of defects
- 3.5. Saw blade is checked against required *curvature* using a gauge to identify *tensioning* requirements
- 3.6. Tension curvature is obtained across and along saw blade in line with required standard
- 3.7. Alignment of saw back is checked against saw tolerances using a gauge and areas not conforming are rolled to obtain required tolerance
4. Repair teeth and blade cracks
- 4.1. Saw blade is placed in *welding jig* for applying heat and undertaking welding activities
- 4.2. Weld line is marked to check amount of damaged tooth to be removed or crack to be repaired and selected to minimise stresses
- 4.3. Metal is removed to the proposed line, the metal edge is prepared for the *welding* process and cleaned free of burn marks
- 4.4. Worn, broken or ground surface is prepared for metal build up or replacement by applying heat and pressure
- 4.5. Teeth or cracked area is built up or replaced using compatible welding material and welding procedures that ensure specified *metal penetration and density*
- 4.6. Weld *run-off tabs* are used to limit stress and hollows at edges of the saw blade
- 4.7. Teeth or cracks are ground or filed to required shape,

ELEMENT**PERFORMANCE CRITERIA**

tolerance and pitch

- 4.8. Saws where teeth, tips or blade cracks are damaged during the repair process and cannot be repaired are disposed of in line with site procedures, manufacturer's recommendations and environmental requirements
- 4.9. Repair process and equipment faults are investigated, *recorded and reported* in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely maintain wide band and gang saw blades
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for maintaining wide band saw blades
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for maintaining wide band saw blades
- Environmental risks and hazards
- Characteristics of welding consumables
- Characteristics of saw steel
- Methods that can be applied to level and tension blades

REQUIRED SKILLS AND KNOWLEDGE

- Teeth repair methods
- Saw condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently maintain wide band saw blades and gang saws within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to maintaining wide band saw blades
- following organisational policies and procedures relevant to maintaining wide band saw blades
- maintaining wide band and gang saw blades in line with work order and within prescribed organisational requirements
- removing and replacing saws from equipment
- assessing saw conditions in line with standard operating procedures

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolating and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the repair of wide band and gang saws in designated equipment
- and may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Wide band and gang saws** are to include:
- large heavy duty saws used widely in the Forestry Industry

RANGE STATEMENT

Maintenance may include:

the correction of:

- lumps
- ridges
- cracks
- broken or damaged teeth

Equipment may include:

- hammers
- stretcher / tension rolls
- levelling rolls
- tension gauges and straight edges to check accuracy of levelling and tensioning
- welding equipment

and a range of hand-held tools including:

- punches
- engineers hammers
- angle grinders
- sanders
- hand files
- abrasive paper/cloth

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Disposing of may include:

- recycling un-serviceable saws/saws where teeth, tips or blade cracks are damaged during the repair process and cannot be repaired
- re-using un-serviceable saws/saws where teeth, tips or blade cracks are damaged during the repair process and cannot be repaired

Ridges or lumps are to include:

- defects and distortions obtained during saw blade operation

Gauges and straight edges are to include:

- measuring and accuracy instruments used in checking the results of hammering and tensioning

RANGE STATEMENT

- Levelling** is to include:
- mechanical gear driven devices used to assist in the process of removing saw defects and distortions such as ridges, lumps, and twists
- Stretcher rolls and levelling rolls** are to include:
- devices for assisting in the process of removing saw defects such as ridges and lumps
- Patterns** are to include:
- methods which use hammers or rolls to remove defects evenly and without affecting the opposing side
- Curvature**
- is the distance or chord height measured when the centre of the blade falls away as a result of an elongating inner zone
 - chord height 'tension drop' is generally measured with a tension gauge having a curvature that suits blade width, thickness, and production conditions
- Tensioning**
- is the process of using mechanically driven rolls to compress and elongate certain sections of the inner zone of a blade; compression of the inner zone places the outer edges of the blade in tension
 - artificially stiffens the cutting edge and reduces the influence of sawing forces that cause buckling of the cutting edge and lateral instability
- Welding jigs**
- are jigs or benches which hold the saw and/or teeth in place securely to allow welding to occur
 - 'benches' incorporate anvils and clamps to lock the blade into welding position
- Welding** may include:
- processes such as:
 - oxyacetylene (fuel gas) welding
 - gas tungsten arc welding (GTAW/TIG)
 - gas metal arc welding (GMAW/MIG)
- Metal penetration and density** is to include:
- a weld bead which provides full penetration fusing together adjacent metal parts
 - a weld free from any faults that would have the potential to weaken the strength and endurance capability of the weld deposit and weld zone
- Run-on and run-off tabs**
- are used mainly in GMAW and GTAW welding processes to ensure full penetration of the weld bead at the start and finish of the weld

RANGE STATEMENT**Tolerance** may include:

- are removed after annealing
- profile
- pitch
- set
- material thickness to manufacturer's specifications

Records and reports may include:

- maintain of wide band and gang saws
- inspection
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)**Unit sector** No sector assigned**Competency field****Competency field** Sawmilling and Processing

FPISAW3221B Profile saw blanks

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to calculate blade lengths, and to produce tooth profiles to enterprise orders and specifications

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3221A Profile saw blanks

Application of the Unit

Application of the unit

The unit involves profiling saw blanks in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for profiling	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to profiling saw blanks are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Band, wide band and gang saws</i> to be <i>profiled</i> are calculated for production</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Profiling process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Profile blanks	<p>2.1. <i>Key dimensions</i> of saw are calculated</p> <p>2.2. Calculated length of <i>blank</i> is obtained or cut from <i>ribbon stock</i></p> <p>2.3. <i>Press</i> is set up with <i>punches</i> to suit saw dimensions</p> <p>2.4. First tooth is punched in blank to provide alignment</p>

ELEMENT	PERFORMANCE CRITERIA
	for other teeth
	2.5. Remaining teeth are punched to required <i>pitch</i> and <i>tooth profile</i>
	2.6. <i>Performance</i> of profiling equipment is assessed for required changes
	2.7. Saw blanks damaged during the process that cannot be repaired are <i>disposed of</i> in line with site procedures and environmental requirements
	2.8. Profiling process and equipment faults are investigated, <i>recorded and reported</i> in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely profile saw blanks
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for profiling saw blanks
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for profiling saw blanks
- Environmental risks and hazards

REQUIRED SKILLS AND KNOWLEDGE

- Characteristics of metal and saws
- Profiling methods
- Teeth pressing and punching methods
- Saw condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently profile saw blanks within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to profiling saw blanks
- following organisational policies and procedures relevant to profiling saw blanks
- profiling saw blanks in line with the work order and within prescribed organisational requirements
- operating profiling equipment
- setting up punch and die sets or other equipment used for profiling saw teeth

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for profiling band, wide band and gang saw blanks in designated equipment
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Band, wide band and gang saws** are to include:
- large heavy duty saws used widely in the Forestry Industry

RANGE STATEMENT

Profiling	is the process of making band, wide band and gang saw blanks in preparation for joining or welding
Equipment may include:	<ul style="list-style-type: none">• power fly presses• punch systems
Communication may include:	<ul style="list-style-type: none">• verbal and non-verbal language• constructive feedback• active listening• questioning to clarify and confirm understanding• use of positive, confident and cooperative language• use of language and concepts appropriate to individual social and cultural differences• control of tone of voice• body language
Key dimensions are to include:	<ul style="list-style-type: none">• blade width• length• pitch• gullet depth• hook and back clearance angles• number of teeth• manufacturer's specifications• existing saw and site documentation• data of timber processing requirements• sawmill processes
Blanks are to include:	<ul style="list-style-type: none">• new blades ready for use after calculation of length, geometry and pressing
Ribbon stock	is the role of blade material, straight on both edges awaiting cutting to length and pressing
Press	is the equipment which provides weight and cutting power to achieve the saw blade profile
Punches	are housed in the press and provide the cutting pattern for the profile of the saw blade and teeth
Pitch is to include:	is the distance between tips of the teeth
Tooth profile is to include:	is the shape of the teeth in line with the material being cut

RANGE STATEMENT

Performance

- is how effectively the profiling equipment is able to produce tooth profiles that meet manufacturing tolerances, specifications and timeframes

and is to include:

- edge finish
- wear rates
- production rates
- distortion

Disposing of may include:

- recycling saw blanks damaged during the process and cannot be repaired
- re-using saw blanks damaged during the process and cannot be repaired

Records and reports may include:

- profiling of band, wide band and gang saw blanks
- inspection
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3222B Recondition band mill wheels

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare the band mill, fit special grinders, grind the wheel profile and re-assemble the band mill in readiness for return of bandsaws and wide bandsaws to service

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3222A Recondition band mill wheels

Application of the Unit

Application of the unit

The unit involves reconditioning band mill wheels in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for reconditioning	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to reconditioning band mill wheels are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.4. Reconditioning process is planned in line with site procedures and environmental requirements</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Fit and grind wheel profile	<p>2.1. Wheel is inspected and measured to identify wear and method of <i>grinding</i></p> <p>2.2. Wheel grinder is serviced, fitted and aligned to the <i>band mill</i> and wheel in line with manufacturer's specifications and recommended <i>tolerances</i></p> <p>2.3. Trial cut is taken to check and further <i>align</i> the</p>

ELEMENT**PERFORMANCE CRITERIA**

- grinder
- 2.4. Wheel is ground until all signs of wear are removed, ensuring the face is not hollow and obtaining the required wheel *profile* and finish
 - 2.5. Grinding *feeds* are controlled to obtain the required profile
 - 2.6. Wheel is measured to ensure the diameter of back and front edges are equivalent
 - 2.7. Wheel profile is measured to ensure grinding has achieved the required profile
 - 2.8. Grinder traversing speeds are controlled to obtain the required profile
3. Reassemble band mill
- 3.1. Grinder and base plate are removed from band mill at completion of grinding
 - 3.2. Band mill components are reassembled to manufacturer's specifications
 - 3.3. Band saw is set up on *mill* to specified alignment
 - 3.4. Band saw and mill operation are tested to ensure correct operation
 - 3.5. *Isolation padlocks or tags* are removed at completion of the work in line with OHS legislation and site procedures
 - 3.6. Band saw mills damaged during the process that cannot be repaired are *disposed of* in line with site procedures and environmental requirements
 - 3.7. Reconditioning process and equipment faults are investigated, *recorded and reported* in line with site requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely recondition band mill wheels
- Communication skills and interpersonal techniques sufficient to interact

REQUIRED SKILLS AND KNOWLEDGE

appropriately with colleagues and others in the workplace

- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to take wheel measurements, and to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for reconditioning band mill wheels
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for reconditioning band mill wheels
- Environmental risks and hazards
- Characteristics of metal and saws
- Disassembly and reassembly methods
- Band mill wheel assessment
- Grinding and alignment techniques
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently recondition band mill wheels within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to reconditioning band mill wheels
- following organisational policies and procedures relevant to reconditioning band mill wheels
- reconditioning band mill wheels in line with the work order and within prescribed organisational requirements
- removing and replacing wheels from band mill if faces are to be resurfaced on a metal lathe
- assessing band mill wheel conditions in line with standard operating procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage

RANGE STATEMENT

requirements

- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Reconditioning

is the process of re-grinding the faces of the band mill wheels with grinding equipment to regain the specified profile for continued accuracy during operation

Band and wide band mill wheels are to include:

- the drive and driven wheels of any bandmill that support, turn, and maintain the alignment of the band saw blade for accurate cutting

Work order is to include:

- instructions for the reconditioning of band mill wheels in designated equipment

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- specialised grinding equipment
- measuring equipment

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Grinding

is the process of removing wear and defects from band mill wheels

Band mill

is the same as 'mill' and is to include the entire mechanical structure and componentry that make

RANGE STATEMENT

	up the machine
Tolerance may include:	<ul style="list-style-type: none">• wheel alignment• alignment of saw guides to wheel faces• wheel thickness to manufacturer's specifications
Alignment	is the process of measuring and testing the band mill wheels to ensure they run in a manner which makes the band saw blade rotate consistently without movement across the wheels
Profile	is the even shape and width of the wheel
Feeds	is the process of matching the speed of band mill wheel rotation with the speed and depth of cut taken by the abrasive grinding wheel or cutting tool being used to re-surface the wheel face
Mill may include:	<ul style="list-style-type: none">• all of the processing plant and timber feed systems which are linked to the band mill
Isolation padlocks and tags may include:	<ul style="list-style-type: none">• devices that isolate the piece of machinery• devices that alert personnel to its isolation from service
Disposing of may include:	<ul style="list-style-type: none">• recycling band saw mills damaged during the process that cannot be repaired• re-using band saw mills damaged during the process that cannot be repaired
Records and reports may include:	<ul style="list-style-type: none">• reconditioning of band mill wheels• inspection• storage locations• quality outcomes• hazards• incidents• equipment malfunctions
	and may be:
	<ul style="list-style-type: none">• manual• using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sectors No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3223B Assess wood chips

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to collect wood chip samples, to test wood chips, and to report and follow up on the results to ensure quality outcomes for downstream processing

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3223A Assess wood chips

Application of the Unit

Application of the unit The unit involves assessing wood chips in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for assessment

- 1.1. Applicable ***Occupational Health and Safety (OHS), environmental, legislative and organisational requirements*** relevant to assessing wood chips are identified and followed
- 1.2. ***Work order*** is reviewed and checked with ***appropriate personnel***
- 1.3. Type and quantity of ***wood chips*** for ***assessment*** are obtained
- 1.4. ***Equipment*** is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations
- 1.5. Testing processes are selected and planned in line with site procedures and environmental requirements
- 1.6. ***Communication*** with others is established and maintained in line with OHS requirements

2. Collect and assess samples

- 2.1. Material being chipped is inspected for ***contaminants***
- 2.2. Chip production, transport and storage processes are examined for potential sources of contamination

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|--|--|
| 3. Test wood chips and report outcomes | <p>2.3. Chips are visually assessed at production, transport and storage locations in line with site procedures</p> <p>2.4. Potential problems with <i>chip characteristics</i> and contamination are reported in line with site procedures and environmental requirements</p> <p>2.5. Chip <i>samples</i> are collected from <i>designated locations</i> and kept free from mixing and contamination</p> <p>2.6. Sampling records are completed in line with site procedures</p> <p>3.1. Chip specifications are identified from production schedules and order requirements</p> <p>3.2. Chips are <i>tested</i> for <i>moisture content</i>, size distribution, shape and contamination</p> <p>3.3. Chip samples are stored and test reports completed in line with site requirements</p> <p>3.4. Test results are communicated to production personnel to facilitate process control or changes</p> <p>3.5. Test sampling is modified in response to new problems and production changes</p> <p>3.6. Testing process and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p> |
|--|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely assess wood chips
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assessing wood chips
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for assessing wood chips
- Environmental risks and hazards
- Sampling and testing techniques
- Characteristics of wood chips
- Visual assessment techniques
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess wood chips within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to assessing wood chips
 - following organisational policies and procedures relevant to assessing wood chips
 - assessing wood chips in line with the work order and within prescribed organisational requirements
 - testing wood chips for contamination and moisture content
 - reporting on outcomes of testing
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred

EVIDENCE GUIDE

to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

RANGE STATEMENT

Environmental requirements
may include:

- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the sampling and testing of wood chips

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to

RANGE STATEMENT

Appropriate personnel may include:	the work <ul style="list-style-type: none">• supervisors• suppliers• clients• colleagues• managers
Wood chips	are the output product as a result of converting wood into chip material which is then used to produce other products
Assessment is to include:	the inspection of wood chips to determine: <ul style="list-style-type: none">• size distribution• shape• finish quality• contamination• faults
Equipment may include:	<ul style="list-style-type: none">• moisture meters• basic testing equipment
Communication may include:	<ul style="list-style-type: none">• verbal and non-verbal language• constructive feedback• active listening• questioning to clarify and confirm understanding• use of positive, confident and cooperative language• use of language and concepts appropriate to individual social and cultural differences• control of tone of voice• body language
Contaminants may include:	<ul style="list-style-type: none">• disease• infestation• rot• paint• plastic• bark• charcoal• rock• metal
Chip characteristics are to include:	<ul style="list-style-type: none">• moisture content• size

RANGE STATEMENT

- shape
- species

Sampling

is the selection of small lots of wood chips from various points of the stockpile or other designated locations

Designated location may include:

- stock piles
- production points
- transport methods
- from transfer systems

Testing is to include:

the most appropriate approach taken to:

- ascertain the cause of a problem
- improve a current methodology

Moisture content

- is the amount of moisture maintained in wood chips after processing to avoid cracking and deforming
- in Australia generally ranges between 10% in warmer, more humid climates to 14% in cooler climates

Records and reports may include:

- sampling and testing results
- quantities produced
- condition changes
- production difficulties
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

manual

using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3224B Coordinate and monitor the wood chip stockpile

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to coordinate and monitor the movement and distribution of wood chips to, from and over the stockpile, including movement and loading

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3224A Coordinate and monitor the wood chip stockpile

Application of the Unit

Application of the unit The unit involves coordinating and monitoring the wood chip stockpile in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan stockpile operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to coordinating and monitoring the wood chip stockpile are identified and followed</p> <p>1.2. Variations in wood chip supply are assessed, recorded and reported</p> <p>1.3. <i>Stockpile</i> schedules are produced and applied in line with site procedures</p> <p>1.4. <i>Chip movement</i> procedures including order information are planned and scheduled</p> <p>1.5. Stockpile management is planned and prescribed</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Control stockpile	<p>2.1. Wood chip stockpile size growth is estimated from <i>production and shipping schedules</i></p> <p>2.2. Direction and extent for <i>spread or contraction</i> of stockpile is planned in line with site procedures and environmental requirements</p> <p>2.3. Chip spreading requirements are estimated</p>

ELEMENT	PERFORMANCE CRITERIA
3. Coordinate wood chip movement and loading	<p>considering the reach of the <i>chip slinging equipment</i></p> <p>2.4. Stockpile is inspected to identify hazards within vehicle operational area</p> <p>3.1. <i>Vehicles</i> and attachments are selected and allocated to spread chips and load <i>transport modes</i></p> <p>3.2. Personnel are advised of spreading, movement and loading operations</p> <p>3.3. Stockpile <i>levelling</i> is coordinated in line with site procedures and environmental requirements</p> <p>3.4. Wood chip retrieval from the stockpile edges is coordinated and directed to transport modes</p> <p>3.5. Stockpile coordination and equipment faults are investigated, <i>recorded and reported</i> in line with site requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely coordinate and monitor the wood chip stockpile
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for coordinating and monitoring the wood chip stockpile
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment

REQUIRED SKILLS AND KNOWLEDGE

- Organisational and site standards, requirements, policies and procedures for coordinating and monitoring the wood chip stockpile
- Environmental risks and hazards
- Wood chip stockpile procedures and management
- Stockpile distribution and control
- Wood chip movement and loading procedures
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently coordinate and monitor the wood chip stockpile in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to coordinating and monitoring the wood chip stockpile
- following organisational policies and procedures relevant to coordinating and monitoring the wood chip stockpile
- coordinating and monitoring the wood chip stockpile for the enterprise

EVIDENCE GUIDE

- controlling stockpile operations and schedules for wood chip movement and loading within the enterprise
 - coordinating personnel to follow planning, coordination, communications and scheduling for stockpile operations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolating and guarding
- legislation
- organisational policies and procedures

Environmental requirements
may include:

RANGE STATEMENT

	<ul style="list-style-type: none"> • workplace practices
Legislative requirements:	are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include: <ul style="list-style-type: none"> • award and enterprise agreements • industrial relations • Australian Standards • confidentiality and privacy • OHS • the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care
Organisational requirements may include:	<ul style="list-style-type: none"> • legal • organisational and site guidelines • policies and procedures relating to own role and responsibility • quality assurance • procedural manuals • quality and continuous improvement processes and standards • OHS, emergency and evacuation procedures • ethical standards • recording and reporting requirements • equipment use and maintenance and storage requirements • environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
Stockpile	is the result of wood chip production, ie a pile of wood chips available for downstream production or transportation to another location
Chip movement is to include:	<ul style="list-style-type: none"> • all forms of moving chips to and from the stockpile
Communication may include:	<ul style="list-style-type: none"> • verbal and non-verbal language • constructive feedback • active listening • questioning to clarify and confirm

RANGE STATEMENT

	<ul style="list-style-type: none"> understanding • use of positive, confident and cooperative language • use of language and concepts appropriate to individual social and cultural differences • control of tone of voice • body language
Production and shipping schedules are to include:	<p>information which reports:</p> <ul style="list-style-type: none"> • amount of production output for wood chips • required quantities for shipping or transport
Spread or contraction is to include:	<p>the increase and decrease in the stockpile caused by:</p> <ul style="list-style-type: none"> • adding production output • removing chips to downstream production or transportation
Chip slinging equipment	<p>manoeuvres chips to the stockpile and spreads it to the designated part of the stockpile from an overhead position</p>
Vehicles may include:	<ul style="list-style-type: none"> • wheeled dozers or loaders • tracked dozers or loaders
Transport modes may include:	<ul style="list-style-type: none"> • ships • trains • trucks
Levelling	<p>is the process of using dozers to spread wood chips to the outer edges of the stockpile to assure stockpile stability, compaction, access for chip retrieval and for continued slinging</p>
Records and reports may include:	<ul style="list-style-type: none"> • coordinating and monitoring outcomes • material movement • despatch outcomes • storage locations • quality outcomes • hazards • incidents • equipment malfunctions <p>and may be:</p> <ul style="list-style-type: none"> • manual • using a computer-based system or other

RANGE STATEMENT

appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3225B Maintain frame saw blades

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to hammer, tension, back-gauge, weld and replace teeth on frame saw blades and includes inspecting saws, repairing defects such as damaged or missing teeth and cracks, and hammering ridges and lumps

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3225A Maintain frame saw blades

Application of the Unit

Application of the unit

The unit involves maintaining frame saw blades in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------|---|
| 1. Prepare for maintenance | 2.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to maintaining frame saw blades are identified and followed |
| 2. Assess saw condition | 2.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> |
| | 2.3. <i>Frame saw blades</i> to be <i>maintained</i> are removed from the designated machinery |
| | 2.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations |
| | 2.5. Repair process is planned in line with site procedures and environmental requirements |
| | 2.6. <i>Communication</i> with others is established and maintained in line with OHS requirements |

ELEMENT**PERFORMANCE CRITERIA**

- 2.7.Saws are handled safely without damage to teeth
- 2.8.Foreign material built up on saw surfaces is cleaned for inspection
- 2.9.Saw is inspected to assess condition of teeth and saw blade
- 2.10. Teeth and tips requiring repair or replacement are checked and marked
- 2.11. Saw is declared unserviceable where hazardous defects are found and *disposed of* in line with site procedures, manufacturer's recommendations and environmental requirements
3. Hammer, tension and back-gauge saw
- 3.1.*Ridges or lumps* across and along saw are assessed and matched on both sides of the blade
- 3.2.*Gauges and straight edges* are used in both directions and monitored for accuracy
- 3.3.Ridges or lumps are progressively removed through *hammering* and the use of *structure rolls or levelling rolls* to achieve flatness
- 3.4.Hammering or rolling *patterns* are controlled to localise stresses to avoid spring-back and re-occurrence of defects
- 3.5.Saw is checked against required *curvature* using a gauge to identify *tensioning* requirements
- 3.6.Tension curvature is obtained across and along saw in line with required standard
- 3.7.Alignment of saw back is checked against saw tolerances using a gauge and areas not conforming rolled to obtain required tolerance
4. Repair teeth
- 4.1.Saw is placed in *welding jig* for applying heat and undertaking welding activities
- 4.2.Weld line is marked to identify amount of damaged tooth to be removed and selected to minimise stresses
- 4.3.Metal is removed to the proposed line, the metal edge is prepared for the *welding* process and cleaned of burn marks
- 4.4.Worn, broken or ground surface is prepared for metal build up or replacement by applying heat and pressure
- 4.5.Teeth are built up or replaced using compatible welding material and welding procedures that ensure specified *metal penetration and density*

ELEMENT**PERFORMANCE CRITERIA**

- 4.6. Weld *run-off tabs* are used to limit stress and hollows at edges of the saw
- 4.7. Teeth are ground or filed to required shape, *tolerance* and pitch
- 4.8. Metal is heat treated to *temper* recommended by manufacturer
- 4.9. Saws damaged during the repair that cannot be repaired are disposed of in line with site procedures, manufacturer's recommendations and environmental requirements
- 4.10. Repair process and equipment faults are investigated, *recorded and reported* in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely maintain frame saw blades
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for maintaining frame saw blades
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for maintaining frame saw blades

REQUIRED SKILLS AND KNOWLEDGE

- Environmental risks and hazards
- Characteristics of metal and saws
- Hammering and tensioning methods
- Teeth repair methods
- Saw condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently maintain frame saw blades within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to maintaining frame saw blades
- following organisational policies and procedures relevant maintaining frame saw blades
- maintaining frame saw blades in line with work order and within prescribed organisational requirements
- removing and replacing saws from equipment
- assessing saw condition in line with standard

EVIDENCE GUIDE

Context of and specific resources for assessment

operating procedures

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

RANGE STATEMENT

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the repair of frame saw blades in designated equipment
- and may include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Frame saw blades** are to include:
- large heavy duty saws used widely in the Forestry Industry

RANGE STATEMENT

- Maintenance** may include: the correction of:
- lumps
 - ridges
 - cracks
 - broken or damaged teeth
- Equipment** may include:
- hammers
 - structure rolls
 - levelling rolls
 - tensioning instruments
 - gauges and straight edges to check accuracy of hammering or tensioning
 - welding equipment
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Disposing of** may include:
- recycling un-serviceable saws/saws damaged during the repair process that cannot be repaired
 - re-using un-serviceable saws/saws damaged during the repair process that cannot be repaired
- Ridges or lumps** are to include:
- defects obtained during saw operation
- Gauges and straight edges** are to include:
- measuring and accuracy instruments used in checking the results of hammering and tensioning
- Hammered** is the process of removing ridges and lumps from saw blades using hammers or rolls
- Structure rolls and levelling rolls** are devices for assisting in the process of removing saw defects such as ridges and lumps
- Patterns** are to include:
- methods which use hammers or rolls to remove defects evenly and without affecting

RANGE STATEMENT

	the opposing side
Curvature is to include:	<ul style="list-style-type: none">• how much tension is achieved in a saw by placing curvature in it
Tensioning	is the process of placing tension in a blade to counteract force during cutting
Welding jigs	hold the saw and tip in place securely to allow welding to occur
Welding may include:	<ul style="list-style-type: none">• oxyacetylene• gas tungsten arc
Metal penetration and density is to include:	<ul style="list-style-type: none">• a weld which provides enough penetration to ensure a strong cohesion• density that ensures the weld is free of holes and inclusions
Run-off tabs are to ensure:	<ul style="list-style-type: none">• that minimal welding splatter ends up on the saw blade, subsequently requiring grinding off
Tolerance may include:	<ul style="list-style-type: none">• profile• pitch• set• material thickness to manufacturer's specifications
Temper	is the toughening process which occurs by heating the welded or built up area and allowing it to cool slowly
Records and reports may include:	<ul style="list-style-type: none">• maintenance of frame saw blades• inspection• storage locations• quality outcomes• hazards• incidents• equipment malfunctions
	and may be:
	<ul style="list-style-type: none">• manual• using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3226B Saw logs using CNC optimising systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to set up, operate and maintain computer numerically controlled (CNC) optimising systems used for the maximisation of timber from every log. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3226A Saw logs using CNC optimising systems

Application of the Unit

Application of the unit The unit involves sawing logs using CNC optimising systems in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------------|---|
| 1. Prepare for machining | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to sawing logs using CNC optimising systems are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>logs</i> to be <i>sawn</i> are acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Log sawing process is planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Set up optimising system | <p>2.1. <i>CNC optimising program</i> is set to job specifications</p> <p>2.2. Safety equipment, including emergency stops, gauges, guards and controls are checked</p> <p>2.3. <i>Saw settings</i> and adjustments are made in line with</p> |

ELEMENT**PERFORMANCE CRITERIA**

- job requirements, and machine and tool manufacturer's instructions
- 2.4.Saw and cutting mechanisms are checked for safe and effective operation
- 2.5.Trial runs are conducted to check system operation, accuracy and quality of finished work
- 2.6.Final adjustments are made to the CNC optimising program and equipment in line with workplace procedures
3. Operate optimising log saw
- 3.1.**Pre start-up checks** are carried out on equipment in line with site requirements
- 3.2.Logs are fed into machine in line with manufacturer's instructions, safe handling procedures and standard workplace operating procedures
- 3.3.Saw is operated in line with its designed capacity and purpose, tooling requirements and manufacturer's recommendations
- 3.4.Saw operation is monitored to ensure product quality and **output**
- 3.5.**Waste** quantities are checked and minimised
- 3.6.Items that do not meet quality requirements are repaired, recycled or discarded in line with workplace procedures
- 3.7.Sawing process and equipment faults are **recorded and reported** to the appropriate personnel
4. Conduct operator maintenance
- 4.1.Equipment lock-out procedures are followed in line with OHS legislation and site proceduresBlades are checked for blunt or damaged condition in line with site procedures
- 4.2.Blunt or damaged saws are identified and **dealt with** in line with site procedures, manufacturer's recommendations and environmental requirements
- 4.3.Machining area is kept clear of dust, off-cuts and debris in line with OHS requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely saw logs using CNC optimising systems
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for sawing logs using CNC optimising systems
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sawing logs using CNC optimising systems
- Environmental risks and hazards
- Characteristics of logs and defects
- Set up and operation of CNC equipment
- Optimising systems
- Computer programs
- Cutting patterns and sequences
- Blade condition assessment
- Industry standard cross-sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently saw logs using CNC optimising systems within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to sawing logs using CNC optimising systems
- following organisational policies and procedures relevant to sawing logs using CNC optimising systems
- sawing logs using CNC optimising systems in line with work order and within prescribed organisational tolerances
- setting computer programs for the CNC optimising system to follow
- conducting operator maintenance on CNC optimising equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance

Organisational requirements may include:

RANGE STATEMENT

- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the machining and despatch of logs and cut product from the work site

and may include:

- type
- size
- length
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Logs are to include:

assessment of:

- diameter range
- curvature
- faults
- species
- moisture content

Sawing is to include:

- sawing operations with CNC optimising systems

Storage locations may include:

- storage racks
- storage bays
- bins

RANGE STATEMENT

- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment is to include:

- CNC optimising log saws
- procedures for lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

CNC optimising program is to include:

- computer generated program, selected by the operator (sub-programs, parametric performance of CAM functions)
- downloading and storing 3D scan data, which translates into the CNC equipment operating automatically to fulfil its programmed instructions

Saw settings may include:

- measurement
- setting equipment to stops, fences, angles, depths, feeds or speeds

RANGE STATEMENT

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- blades are installed accurately
- machinery is operating to optimum performance

Output is to include:

- the speed at which material is cut
- rate at which material is cut

Waste may include:

- off-cuts
- shavings
- sawdust

Records and reports may include:

- the sawing method
- optimising reports
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

manual using a computer-based system or another appropriate organisational communication system

Dealing with may include:

- repairing blunt or damaged saws
- disposing of blunt or damaged saws that cannot be repaired

Unit Sector(s)

Unit sector

No sector required

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3227B Select and saw logs in multi-species operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to select and prepare multi-species logs for sawing, to set up the processing of logs and to maintain the production flow

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW3227A Select and saw logs in multi-species operations

Application of the Unit

Application of the unit

The unit involves selecting and sawing logs in multi-species operations in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select log and prepare for sawing	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>selecting</i> and <i>sawing</i> logs in <i>multi-species</i> operations are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Appropriate logs are selected by species and size or grade, and billeted to suit work order</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Log is selected with reference to production and log utilisation requirements</p> <p>1.6. Logs with <i>features</i> which are not suitable are segregated or rejected and <i>disposed of</i> in line with site procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>

ELEMENT	PERFORMANCE CRITERIA
2. Break down logs	<p>2.1. Pre start-up checks are carried out on equipment in line with site requirements</p> <p>2.2. Sawing or selection process is planned in line with site procedures, environmental requirements and to optimise volume and quality of recovery</p> <p>2.3. Log is held with dogs, minimising damage and aligning with saw/s</p> <p>2.4. Logs or flitches are cleared of foreign matter and fed into the saw at the feed rate prescribed by organisational requirements</p> <p>2.5. Sawing sequence is planned, maintained and adjusted to produce the required quantity of flitches or cants and to maximise the feed rate</p> <p>2.6. Break down process is regularly checked and adjusted to maintain the desired quality and output</p> <p>2.7. Break down processes are adjusted to allow for changes in species, revealing of features, or unacceptable characteristics</p> <p>2.8. Break down process and equipment faults are recorded and reported to the appropriate personnel</p> <p>2.9. Flitches or cants are safely directed in line with flow control</p>
3. Conduct operator maintenance	<p>3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>3.2. Saw blades are checked for blunt or damaged condition</p> <p>3.3. Blunt or damaged saws are identified and dealt with in line with site procedures, manufacturer's recommendations and environmental requirements</p> <p>3.4. Machine area is kept clear of residue and debris and maintained as required</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and

REQUIRED SKILLS AND KNOWLEDGE

equipment; identify species and strength groups of logs; identify recovery potential of raw resource (logs); efficiently and safely saw logs in multi-species operations

- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures; accurately identify blunt or damaged saws in multi-species operations

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for selecting and sawing logs in multi-species operations
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for selecting and sawing logs in multi-species operations
- Environmental risks and hazards
- Log sawing systems and machine capabilities
- Species and recovery characteristics of timber and timber defects
- Cutting pattern requirements, feed rates and finish
- Blade condition assessment
- Flow control systems and marking requirements
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently saw logs in multi-species operations within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to selecting and sawing logs in multi-species operations
- following organisational policies and procedures relevant to selecting and sawing logs in multi-species operations
- selecting logs in line with production requirements and log utilisation
- selecting and sawing logs in multi-species operations to produce flitches in line with the work order and within prescribed organisational specifications
- conducting operator maintenance on saw machinery

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package

EVIDENCE GUIDE

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards

Organisational requirements
may include:

RANGE STATEMENT

- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Selection may include:

- species
- size
- length
- quality
- shape
- sweep
- spiral grain
- pipe
- heart line
- strength group
- defects
- characteristics
- durability
- borer resistance

Sawing

- is the process of cutting a log into parts including flitches, cants and off-cuts

Multi-species logs are to include: assessment of:

- diameter range
- curvature
- faults
- softwood species of various types
- moisture content

Work order is to include:

- instructions for the selecting and sawing of logs and despatching of flitches or cants from the work site to down-stream processing

and may include:

- treating
- species
- diameter
- length
- quantity
- grade

RANGE STATEMENT

Appropriate personnel may include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work
- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment includes:

- loaders
- forklifts
- chainsaws
- other yarding equipment utilised in log selection and conversion

and may include:

- circular saws
- bench saws
- overhead frame saws or band saws (single, twin, single edges and twin edges)
- mechanical feed
- conveyors
- standard two-five headed dog carriages
- flat top carriages with head rigs

and is to include:

- procedures for machine lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Features may include:

- defects arising from a change in moisture content
- curvature
- spiral grain
- shakes
- insect defects
- knots and resin pockets
- sweep
- taper
- end splits and shape
- heart shakes
- heart crack-decay

RANGE STATEMENT

Disposing of may include:

- recycling timber with unsuitable features
- re-using timber with unsuitable features

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- saw has been set-up correctly
- blades are installed accurately
- machinery is operating to optimum performance

Optimising includes:

- planning the cutting of a log to achieve the most from it
- ensuring environmental requirements are central to this planning process

Dogs

- are the carriage devices which secure logs during break down

Flitch

- is a large piece of sawn log intended for further cutting that is sawn on at least two surfaces

Feed rate is to include:

- rate of speed the material is passed through the saw/s, allowing for the type of saw blades, power source, log species, depth of cut and log quality affecting the sharpness of the blades
- finish of the material
- production output

Cant

is a thick piece of timber with two or more surfaces sawn from a log and intended for further sawing

Break down

is the process of sawing a log into its parts as specified by the work order and the characteristics of the log

RANGE STATEMENT

Characteristics may include:

- gum veins
- over growths
- knots
- resin pockets

Records and reports may include:

- the sawing procedures
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Dealing with may include:

- repair of damaged saws and blunt or damaged saw blades
- disposing of saws and saw blades that cannot be repaired

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3228B Apply principles of blade design to sawing procedures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to maintain quality output by selecting blades for various sawing operations and by applying principles of blade design

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves applying principles of blade design to sawing procedures in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------------|---|
| 1. Maintain quality output | 1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to applying principles of blade design to sawing procedures are identified and followed
1.2. <i>Quality system</i> procedures are applied and adhered to
1.3. <i>Blades</i> are <i>visually inspected</i> before processing <i>products</i> and completing work
1.4. <i>Product specifications</i> are checked and conformed with
1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Apply blade design principles | 2.1. <i>Types</i> and <i>styles</i> of blades are classified in line with workplace procedures
2.2. <i>Properties</i> of blades are compared with product specification requirements
2.3. Blade <i>characteristics</i> and <i>design capacities</i> are evaluated and compared to work requirements
2.4. Blades are selected to suit work requirements, material being cut and environmental requirements |

ELEMENT	PERFORMANCE CRITERIA
3. Monitor and control blade care	<p>3.1. <i>Sawing</i> is planned to <i>optimise</i> the resource value and minimise damage and wear to blades</p> <p>3.2. Machinery and equipment are regularly maintained and adjusted to minimise product waste and maximise blade lifespan</p> <p>3.3. Problems are immediately assessed and rectified to avoid damage to blades</p> <p>3.4. Damage to blades is <i>dealt with</i> in line with site procedures, manufacturer's recommendations and environmental requirements</p> <p>3.5. Quality output through applying blade design principles and blade care procedures are <i>recorded and reported</i> in line with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely select blades for sawing procedures
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and blade faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for applying principles of blade design to sawing procedures
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

applying principles of blade design to sawing procedures

- Environmental risks and hazards
- Blade design principles
- Optimisation of saw blade use
- Quality systems
- Blade care and processing
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently select blades for sawing procedures in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to applying principles of blade design to sawing procedures
- following organisational policies and procedures relevant to applying principles of blade design to sawing procedures
- selecting blades for sawing procedures in line with environmental legislation and workplace procedures

EVIDENCE GUIDE

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable

EVIDENCE GUIDE

adjustment may be applied during assessment

- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements

may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations

RANGE STATEMENT

- Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Quality systems** may include:
- enterprise based systems
 - second party certification
 - third party certification
 - ISO9000 series
 - other regulatory systems
- Blades** are to include:
- all types of saw blades used by the enterprise
- Visual inspection** may include:
- assessing the condition of blades
 - assessing any visual wear or damage which may have occurred during operation
- Product** may include:
- trees
 - logs
 - timber
 - panels
 - boards
- Product specifications** may
- specifications set for optimisation of timber in line with the available resource

RANGE STATEMENT

include:

- customer requirements
- industry standard cross sections and lengths
- enterprise standards

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Types may include:

- circular saw blades
- band saw blades
- gang saw blades
- wide saw blades

Styles may include:

- standard steel blades
- tungsten tipped blades
- stellite tipped blades

Properties are to include:

- metal from which blades are made
- tensile strength of the blade
- geometry and concentricity

Characteristics are to include:

- blade pitch
- kerf
- gullet
- face
- set
- straightness
- profile
- angle
- depth
- teeth shape
- application (cross cut or ripping)
- number of teeth per metre

Design capacity

is the rated capacity of the blade in terms of speed (for tension and temperature) and hardness

Sawing

is the process of cutting products using cross-cut

RANGE STATEMENT

or ripping methods

Optimising includes:

- planning the sawing of timber to achieve the most from it
- ensuring environmental requirements are central to this planning process

Dealing with may include:

- repairing blunt or damaged saws and saw blades
- disposing of blunt or damaged saws and saw blades that cannot be repaired

Records and reports may include:

- maintaining quality and product care procedures
- risk
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW3229B Operate a portable sawmill

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to produce sawn green boards using a portable sawmill in line with site requirements and customer specifications

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdiction

This unit replaces FPISAW3229A Operate a portable sawmill

Application of the Unit

Application of the unit The unit involves operating a portable sawmill in a forest setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------|---|
| 1. Prepare for sawing | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to operating a portable sawmill are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>logs</i> to be <i>sawn</i> is selected from the location</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Sawing process is planned to <i>optimise</i> volume and quality of recovery</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Break down logs | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Logs to be sawn are <i>positioned</i> with cant hooks, winches or log rollers and <i>stabilised</i> with chock logs</p> |

ELEMENT	PERFORMANCE CRITERIA
	or pre-notched runners in line with site procedures
	2.3.Sawn board dimensions are obtained from customer orders or work order
	2.4.Number of boards and <i>sequence of cuts</i> from an individual log are estimated taking into account log characteristics
	2.5.Saw, <i>carriage</i> and mill are adjusted to suit dimensions of boards to be cut
	2.6.Saw is operated to saw logs while controlling <i>sawn edges</i>
	2.7. <i>Defects</i> in logs, reject boards and off-cuts are directed to waste or <i>sawn recovery</i>
	2.8.Portable sawmilling process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Conduct operator maintenance	3.1.Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2.Saw and saw blades are checked for blunt or damaged condition in line with site procedures
	3.3.Blunt or damaged saws and saw blades are identified and <i>dealt with</i> in line with site procedures and manufacturer's recommendations and environmental requirements
	3.4.Machine area is kept clear of dust and debris in line with OHS and site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; safely and efficiently operate a portable sawmill
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to calculate dimensions, and to estimate, measure and

REQUIRED SKILLS AND KNOWLEDGE

calculate time required to complete a task

- Problem solving skills sufficient to accurately identify blunt or damaged saws; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a portable sawmill
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a portable sawmill
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Portable sawmilling systems
- Characteristics of timber and timber defects
- Break down processes, feed rates and finish
- Blade condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and

EVIDENCE GUIDE

efficiently operate a portable sawmill within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to operating a portable sawmill
- following organisational policies and procedures relevant to operating a portable sawmill
- operating a portable sawmill to produce green boards in line with the work order and within prescribed organisational specifications
- conducting operator maintenance on portable sawmill machinery

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to

EVIDENCE GUIDE

access and correctly interpret and apply the required knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment

RANGE STATEMENT

- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- machine isolation and guarding
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling)

RANGE STATEMENT

- and re-use guidelines)
- Work order** is to include:
- instructions for the portable sawmill location
 - sawing logs and despatching from the work site to down-stream processing
- and may include:
- species
 - diameter
 - length
 - quantity
 - grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Logs** are to include: assessment of:
- diameter range
 - curvature
 - faults
 - species
 - moisture content
- Sawing** is the process of cutting a log into parts including green boards and off-cuts
- Equipment** includes:
- portable sawmills
 - procedures for machine lock-out, i.e. protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Optimising** includes:
- planning the cutting of a log to achieve the most from it, i.e. the most and widest boards possible
 - ensuring environmental requirements are central to this planning process
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback

RANGE STATEMENT

- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- saw has been set-up correctly
- blades are installed accurately
- machinery is operating to optimum performance

Positioned may include:

use of:

- cant hooks
- winches
- log rollers
- mechanical lifting equipment

Stabilised may include:

use of:

- chock logs
- wedges
- pre-notched runners

Sequence of cuts

is the process of sawing a log into its parts as specified by the work order and the characteristics of the log in an order which optimises return of green boards

Carriage may include:

component of the portable sawmill that:

- supports the log and assists with feed during the sawing process
- supports the saw and allows the saw to travel through the log

Sawn edges are to include:

- waste sections of timber
- round sides of the first cut

Defects may include:

- defects arising from a change in moisture content
- warp
- wane

RANGE STATEMENT

- curvature
- shakes
- insect defects
- knots and resin pockets
- sweep
- taper
- end splits
- shape

Sawn recovery

- is the marketable timber from the reject timber and off-cuts

Records and reports may detail:

- sawing procedures
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Dealing with may include:

- repairing blunt or damaged saws and saw blades
- disposing of blunt or damaged saws and saw blades that cannot be repaired

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW4201B Plan and monitor timber treatment plant operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to oversee and plan timber treatment plant procedures, monitor performance, review and modify treatment operations and assess technical developments. This unit includes provision for continuous improvement and application of cost effective measures

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW4201A Plan and monitor timber treatment plant operations

Application of the Unit

Application of the unit The unit involves planning and monitoring timber treatment plant operations in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------------------|---|
| 1. Plan treatment plant procedures | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planning and monitoring timber treatment plant operations are identified and followed</p> <p>1.2. Variations in timber characteristics are assessed and <i>moisture content</i> registered</p> <p>1.3. <i>Timber treatment</i> schedules are produced and applied in line with site procedures and environmental requirements</p> <p>1.4. <i>Water management</i> procedures are planned and scheduled</p> <p>1.5. <i>Waste minimisation</i> and control measures are</p> |
|------------------------------------|---|

ELEMENT	PERFORMANCE CRITERIA
	planned and prescribed
	1.6. Communication with others is established and maintained in line with OHS requirements
2. Monitor treatment plant performance	2.1. Charge sheets are checked and interpreted to ensure accuracy
	2.2. Reconciliation statements are checked and interpreted to ensure accuracy
	2.3. Process trends are checked and analysed for optimum performance
	2.4. Treatment operations and output are monitored to record possible process improvements and to ensure maximum cost effectiveness
	2.5. Timber with sub-standard treatment results is disposed of in line with site procedures and environmental requirements
	2.6. Treatment operations, major problems and equipment faults are investigated, recorded and reported in line with site requirements
3. Modify operations and assess technical developments	3.1. Modifications are made to schedules to ensure optimum performance
	3.2. Treatment improvement modifications are documented and communicated in line with site procedures
	3.3. Developments in treatment processes and related technology are diagnosed for possible improvements
	3.4. Technical developments are analysed and assessed for potential incorporation into existing plant operations and procedures
	3.5. Proposed developments are authorised, trialled, documented and introduced into site operations
	3.6. Material from unsuccessful trials is disposed of in line with site procedures and environmental requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to assess, schedule and apply treatment plant procedures; monitor treatment plant performance and modify operations as required; analyse and assess technical developments for incorporation into existing operations and procedures; efficiently and effectively plan and monitor timber treatment plant operations
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to interpret charge sheets, reconciliation statements and process trends, and to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to demonstrate appropriate response procedures to major problems and equipment faults

Required knowledge

- Basic knowledge and understanding of applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for planning and monitoring timber treatment plant operations
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and monitoring timber treatment plant operations
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Timber treatment plant operation procedures
- Water management methodologies
- Waste minimisation control measures
- Treatment plant modification strategies
- Technical development diagnosis and solution methodologies
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks

REQUIRED SKILLS AND KNOWLEDGE

- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and monitor timber treatment plant operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to planning and monitoring timber treatment plant operations
- following organisational policies and procedures relevant to planning and monitoring timber treatment plant operations
- planning and monitoring of timber treatment plant operations for the enterprise
- modifying timber treatment plant operations for the enterprise
- coordinating personnel to follow planning, communications and scheduling for timber treatment plant operations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context

EVIDENCE GUIDE

- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

RANGE STATEMENT

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Moisture content

is the amount of moisture maintained in timber or timber products after kiln drying to avoid cracking and deforming

Timber treatment

- is the process of impregnating preservative solution filled with chemicals into the timber to provide it with a durable resistance to weather and insect attack

and may include:

- full cell
- modified cell
- empty cell
- double vacuum
- dip diffusion
- vat and sprays
- other processes developed by the enterprise

Water management may include:

- stormwater
- contaminated water
- bore water
- recycled dam water
- town mains water

Waste minimisation may include:

- measures to control chemical waste
- wood residues
- packaging residues
- debris

RANGE STATEMENT

- soil
 - other foreign matter
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Charge sheets** are to include:
- records of the treatment plant charge
 - amount of power and energy developed and used
- Reconciliation statements** are to include:
- statements reflecting chemical usage and cost
 - treatment times for cycles
 - breakdown losses
 - energy costs
 - modification expenses
- Process trends** are to include:
- mapping processing conditions to establish trends
 - using this information for modifications
- Disposing of** may include:
- recycling sub-standard timber/unsuccesful trial material
 - re-using sub-standard timber/unsuccesful trial material
- Records and reports** may include:
- planning and monitoring outcomes
 - reconciliations
 - charge sheets
 - material movement
 - despatch outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual

RANGE STATEMENT

- Technical developments** may include:
- using a computer-based system or another appropriate organisational communication system
 - less toxic chemicals
 - improved methods of chemical penetration
 - improved chemical formulation
 - improved process methods

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW4202B Plan and monitor saw log operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan fitch, cant sizes and cutting patterns, to coordinate sawing processes and monitor equipment and output

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW4202A Plan and monitor saw log operations

Application of the Unit

Application of the unit

The unit involves planning and monitoring saw log operations in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan saw log operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planning and monitoring saw log operations are identified and followed</p> <p>1.2. Variations in timber characteristics are assessed, recorded and reported to <i>sawyers</i></p> <p>1.3. <i>Timber cutting</i> schedules are produced and applied in line with site procedures</p> <p>1.4. <i>Log management</i> procedures, including order information, are planned, scheduled and communicated to sawyers</p> <p>1.5. <i>Cutting patterns</i> are planned and prescribed in line with environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Monitor saw log performance	<p>2.1. Standard cutting patterns are reviewed for suitability to planned cutting schedules</p> <p>2.2. Timber cutting processes are monitored for effectiveness of cutting pattern and condition of timber</p>

ELEMENT	PERFORMANCE CRITERIA
3. Coordinate saw log operations	<p>2.3. Assistance is provided to sawyers with the evaluation of logs and sawing problems</p> <p>2.4. Saw log management and <i>output</i> are monitored to record possible process improvements</p> <p>2.5. Saw log operations, major problems and equipment faults are investigated and <i>recorded and reported</i> in line with site requirements</p> <p>3.1. Cutting operations and output are monitored to record and action possible process improvements based on cutting patterns, timber being processed and environmental requirements</p> <p>3.2. Modifications are made to cutting patterns or schedules to ensure optimum performance and communicated to operators</p> <p>3.3. Cutting improvement modifications are documented and communicated in line with site procedures and environmental requirements</p> <p>3.4. Cutting output details are obtained and recorded in line with site requirements</p> <p>3.5. Cut timber is directed to <i>storage</i> or <i>transferred</i> for further processing</p> <p>3.6. Operating logs and cutting records are completed and maintained to site standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to assess, schedule and apply saw log operations; monitor saw log performance and modify operations as required; efficiently and safely plan and monitor saw log operations
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task

REQUIRED SKILLS AND KNOWLEDGE

- Problem solving skills sufficient to demonstrate appropriate response procedures to major problems and equipment faults

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and monitoring saw log operations
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and monitoring saw log operations
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Log sawing procedures and management
- Cutting pattern methodologies
- Cutting sequences
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and monitor saw log operations in line with organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to planning and monitoring saw log operations
- following organisational policies and procedures relevant to planning and monitoring saw log operations
- planning and monitoring of saw log operations for the enterprise
- modifying cutting patterns and schedules for saw log operations within the enterprise
- coordinating personnel to follow planning, communications and scheduling for saw log operations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required

EVIDENCE GUIDE

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

- Sawyers** are the operators who use the saws to saw logs
- Timber cutting** is the process of converting logs into flitches or cants following prescribed cutting patterns
- Log management** is to include:
- assessing individual logs for the most suitable cutting sequence and pattern
 - assessing which type of flitches or cants can be cut from the log
 - handling of the log
- Cutting patterns** is the way in which the log is cut up to achieve the output of flitches or cants planned for that log
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Output** is the size, quality and quantity of flitches or cants produced from a log
- Records and reports** may include:
- planning and monitoring outcomes
 - operating logs
 - cutting records
 - material movement
 - despatch outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system

RANGE STATEMENT

Storage may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Transferral may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment

lifting equipment may include:

- fork lifts
- slings
- trolley jacks
- gantry cranes
- loaders

assistance with lifting may include:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW4203B Coordinate timber drying operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to coordinate and plan timber drying procedures, control the drying process, assess the timber and estimate processing required and check the processed timber

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPISAW4203A Coordinate timber drying operations

Application of the Unit

Application of the unit

The unit involves coordinating timber drying operations in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan drying procedures	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to coordinating timber drying operations are identified and followed</p> <p>1.2. Variations in timber characteristics are assessed and <i>moisture content</i> measured and recorded</p> <p>1.3. <i>Timber drying</i> schedules are produced and applied in line with site procedures</p> <p>1.4. <i>Kiln management</i> procedures are planned and scheduled in line with site procedures and environmental requirements</p> <p>1.5. <i>Process cycles</i> are planned and prescribed</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Control drying operations	<p>2.1. <i>Charge sheets</i> are checked and interpreted to ensure accuracy in line with final moisture content reading</p> <p>2.2. <i>Process trends</i> are checked and analysed for optimum performance</p> <p>2.3. <i>Seasoning chambers</i> are checked and controlled in</p>

ELEMENT	PERFORMANCE CRITERIA
3. Coordinate drying process	<p>line with standard operating procedures</p> <p>2.4. Drying operations, major problems and equipment faults are investigated and <i>recorded and reported</i> in line with site requirements</p> <p>3.1. Drying operations and output are monitored to record possible process improvements based on moisture control and timber being processed</p> <p>3.2. Modifications are made to processing cycles to ensure optimum performance and communicated to operators</p> <p>3.3. Drying improvement modifications are documented and communicated in line with site procedures</p> <p>3.4. Charge details are obtained and recorded in line with site requirements</p> <p>3.5. Dried timber is directed to <i>storage</i> or <i>transferred</i> for further processing</p> <p>3.6. Operating logs and seasoning records are completed and maintained to site standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to assess, schedule and apply drying procedures; monitor drying operations and output, and modify as required; efficiently and safely coordinate timber drying operations
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to demonstrate appropriate response procedures to major problems and equipment faults

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for coordinating timber drying operations

- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for coordinating timber drying operations
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Timber drying operation procedures
- Kiln management methodologies
- Process cycles and modifications
- Timber characteristics and moisture content interpretation
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently coordinate timber drying operations in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to coordinating timber drying operations
 - following organisational policies and procedures relevant to coordinating timber drying operations
 - coordinating timber drying operations for the enterprise
 - modifying timber drying operations for the enterprise
 - coordinating personnel to follow planning, communications and scheduling for timber drying operations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements** may include:
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Moisture content is the amount of moisture maintained in timber or timber products after kiln drying to avoid cracking and deforming

Timber drying is the process of:

- placing timber in a heat controlled kiln to dry

RANGE STATEMENT

- high levels of moisture from timber causing cell collapse followed by humidity generation to recondition timber to its former shape and desired EMC
- Kiln management** may include:
- in the case of hardwood, final kiln drying to required moisture content
 - low temperature kilns
 - conventional
 - high temperature kilns and vacuum dryers
 - setting process cycles and charge rates
- Process cycles** are the times taken for each stage of the process
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Charge sheets** are to include:
- records of the treatment plant charge
 - amount of power and energy developed and used
- Process trends** are to include:
- mapping processing conditions to establish trends
 - using this information for modifications
- Seasoning chambers** are the various compartments or rooms of a kiln that are independently controlled
- Records and reports** may include:
- coordinating outcomes
 - operating logs
 - seasoning records
 - charge sheets
 - material movement
 - despatch outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents

RANGE STATEMENT

- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Storage may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)
- and may be divided into:
 - standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position

Transferral may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPISAW4204B Plan and monitor board conversion

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to plan the production of boards and cutting patterns, coordinate sawing processes and monitor equipment and output

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves planning and monitoring board conversion in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan conversion operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planning and monitoring board conversion are identified and followed</p> <p>1.2. Variations in timber characteristics are assessed, <i>recorded and reported</i> to sawyers</p> <p>1.3. <i>Board conversion</i> schedules are produced and applied in line with site procedures</p> <p>1.4. <i>Fitch and cant management</i> procedures including order information are planned, scheduled and <i>communicated</i> to sawyers</p> <p>1.5. <i>Cutting patterns</i> are planned and prescribed in line with site procedures and environmental requirements</p> <p>1.6. Communication with others is established and maintained in line with OHS requirements</p>
2. Monitor board conversion performance	<p>2.1. Standard cutting patterns are reviewed for suitability to planned cutting schedules</p> <p>2.2. Board cutting processes are monitored for effectiveness of cutting pattern and condition of timber</p> <p>2.3. Assistance is provided to sawyers with the evaluation of fitches or cants and sawing problems</p> <p>2.4. Board management and <i>output</i> are monitored to</p>

ELEMENT	PERFORMANCE CRITERIA
3. Coordinate board conversion	<p>record possible process improvements</p> <p>2.5. Unsuitable flitches or cants are rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.6. Board conversion, major problems and equipment faults are investigated, recorded and reported in line with site requirements</p> <p>3.1. Cutting operations and output are monitored to record and action possible process improvements based on cutting patterns and timber being processed</p> <p>3.2. Modifications are made to cutting patterns or schedules to ensure optimum performance and communicated to operators</p> <p>3.3. Cutting improvement modifications are documented and communicated in line with site procedures</p> <p>3.4. Cutting output details are obtained and recorded in line with site requirements</p> <p>3.5. Converted boards are directed to <i>storage</i> or <i>transferred</i> for further processing</p> <p>3.6. Operating logs and cutting records are completed and maintained to site standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to assess, schedule and apply conversion operations; monitor conversion performance and modify operations as required to ensure optimum performance; efficiently and safely plan and monitor board conversion
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to demonstrate appropriate response procedures to major problems and equipment faults

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and monitoring board conversion
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and monitoring board conversion
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Flitch and cant procedures and management
- Cutting pattern methodologies
- Cutting sequences
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and monitor board conversion in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to planning and monitoring board conversion
- following organisational policies and procedures relevant to planning and monitoring board conversion
- planning and monitoring board conversion for the enterprise
- modifying cutting patterns and schedules for board conversion within the enterprise
- coordinating personnel to follow planning, communications and scheduling for board conversion

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions

RANGE STATEMENT

- relating to forest fire
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements** may include:
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Records and reports** may include:
- planning and monitoring outcomes
 - operating logs
 - cutting records
 - material movement
 - despatch outcomes

RANGE STATEMENT

- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Sawyers

are the operators who use the saws to saw boards

Board conversion

is the process of producing boards by re-sawing green flitches or cants to optimise single boards maximising the amount of boards per flitch or cant

Flitch and cant management is to include:

- assessing individual flitches or cants for the most suitable cutting sequence and pattern
- assessing which type of boards can be cut from the flitch or cant

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Cutting patterns

is the way in which the flitch or cant is cut up to achieve the output boards planned for that log

Output is to include:

what is produced from a flitch or cant in relation to:

- size
- volume recovery
- sawn finish
- dimensional consistency
- quality of boards

RANGE STATEMENT

Disposing of may include:

- recycling unsuitable fitches or cants
- re-using unsuitable fitches or cants

Storage may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)
- and may be divided into:
 - standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position

Transferral may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment

lifting equipment may include:

- fork lifts
- slings
- trolley jacks
- gantry cranes
- loaders

assistance with lifting may include:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Sawmilling and Processing

FPITMM2201B Cut material to length and angles

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and cut material to length and angle with a power driven saw. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM2201A Cut material to length and angle

Application of the Unit

Application of the unit

This unit involves cutting material to length and angle in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------------|--|
| 1. Prepare for cutting | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to cutting material to length and angle are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be cut is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work order and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Cutting list is interpreted in line with work order and site procedures</p> <p>1.6. Material <i>cutting patterns and saw set-up sequences</i> are planned in line with site procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Cut material to length and angle | <p>2.1. Material is marked and stops set in preparation for cutting</p> <p>2.2. Equipment and machinery are used in line with</p> |

ELEMENT

PERFORMANCE CRITERIA

- organisational procedures, manufacturer's instructions and environmental protection requirements
- 2.3. Cutting sequence and patterns are followed to produce the required quantity
- 2.4. Cuts are checked for length and angle within a set *tolerance*
- 2.5. Material with *defects*, incorrect cuts and off-cuts are *disposed* of in line with site procedures and environmental requirements
- 2.6. Processing and equipment faults are reported to the appropriate personnel
- 2.7. Material is safely *stacked* in a designated location in line with work order requirements
- 3. Conduct operator maintenance
 - 3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
 - 3.2. Saw blades are checked for blunt or damaged condition
 - 3.3. Saw blades are removed and replaced in line with manufacturer's recommendations and used blades are disposed of in line with site procedures and environmental requirements
 - 3.4. Saw area is kept clear of dust, off-cuts and debris in line with OHS and site requirements
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and safely cut material to length and angle
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task and to calculate length and angle of material for cutting
- Problem solving skills sufficient to review and accurately identify work requirements, identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for cutting material to length and angle
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for cutting material to length and angle
- Environmental risks and hazards
- Characteristics of timber and timber defects
- Cutting patterns and sequences
- Saw blade condition assessment
- Industry standard cross-sections and lengths
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently cut materials to length and angle within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to cutting material to length and angle
- following organisational policies and procedures relevant to cutting material to length and angle
- effectively communicating and following safe work practices
- cutting material to length and angle in line with the work order and within prescribed organisational tolerances
- conducting operator maintenance on a docking saw
- stacking batches of cut material in line with organisational requirements and OHS regulations
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Context of and specific resources for assessment

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards

RANGE STATEMENT

- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the cutting and despatch of timber and timber products from the work site

and may include:

- type
- size
- length
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board products
- coated and/or treated timber products
- beams or laminated beams

Storage locations may include:

- storage racks

RANGE STATEMENT

- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- measuring equipment
- power operated
- manually controlled docking and trimming saws where the cutting angle is controlled relative to the board guides and clamps
- saws with adjustable angle
- saws with one blade
- radial arm saws
- table saws
- bench saws
- saws with automatic feed

and is to include:

- procedures for saw lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Cutting patterns and saw set-up sequences are to include:

- single and compound angles requiring one or two cutting passes

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm

RANGE STATEMENT

understanding

- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Tolerances

are a set limit for cutting over or under the required length within a set margin of acceptance usually + or - 0.5 mm or in line with order or organisational requirements

Defects may include:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling material with defects, incorrect cuts and off-cuts
- re-using material with defects, incorrect cuts and off-cuts

Stacking may include:

- preparing for transport
- categorising in common size, length and angle
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM2202B Machine material

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate and maintain basic static machines used for sawing, planing, sanding and drilling. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM2202A Machine material

Application of the Unit

Application of the unit

This unit involves machining material in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for machining	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to machining material are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be <i>machined</i> is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Material machining process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set up machines	<p>2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked</p> <p>2.2. <i>Machine settings</i> and adjustments are made in line with job requirements, and machine and tool</p>

ELEMENT	PERFORMANCE CRITERIA
3. Operate machines	<p>manufacturer's instructions</p> <p>2.3. Trial runs are conducted to check machine operation, accuracy and quality of finished work</p> <p>2.4. Material machined during the trial run is accepted or rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.5. Necessary adjustments are made to machine settings</p> <p>3.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>3.2. Machine is operated in line with manufacturer's instructions, safe handling procedures, standard workplace operating procedures and environmental protection requirements</p> <p>3.3. Machine operation is monitored to ensure product quality and <i>output</i></p> <p>3.4. Material is safely <i>stacked</i> in a designated location in line with work order requirements</p> <p>3.5. <i>Waste</i> quantities are checked and minimised and items that do not meet quality requirements repaired, recycled or discarded in line with site procedures and environmental requirements</p> <p>3.6. Fixed cutter heads are removed and replaced in line with site procedures</p> <p>3.7. Straight cutters are jointed in line with site procedures</p> <p>3.8. Machining outcomes and equipment faults or maintenance requirements are <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to safely machine material, use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task and to calculate quantities of materials
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures, review and accurately identify work requirements

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for machining material
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for machining material
- Environmental risks and hazards
- Characteristics of timber, timber products and defects
- Cutting patterns and sequences
- Blade, knife, drill and sanding belt condition assessment
- Industry standard cross-sections and lengths
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must

EVIDENCE GUIDE

be able to provide evidence that they can safely and efficiently machine material within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to machining material
- following organisational policies and procedures relevant to machining material
- effectively communicating and following safe working practices
- machining material in line with the work order and within prescribed organisational tolerances
- conducting operator maintenance on sawing, planning, drilling and sanding equipment
- stacking batches of machined material in line with organisational requirements and OHS regulations
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Context of and specific resources for assessment

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks,

EVIDENCE GUIDE

with questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling)

RANGE STATEMENT

and re-use guidelines)

Work order is to include:

- instructions for the machining and despatch of timber and timber products from the work site

and may include:

- type
- size
- length
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board products
- coated and/or treated timber products
- beams or laminated beams

Machining is to include:

- sawing operations
- planing operations
- drilling
- sanding

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks

RANGE STATEMENT

- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- measuring equipment
- docking saws
- bench saws
- panel saws
- bandsaws
- panel planers
- surface planers
- drill presses
- boring machines
- edge sanders
- profile sanders
- panel sanders
- stroke sanders

and is to include:

- procedures for lock-out, i.e. protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language appropriate to individual social and cultural differences

RANGE STATEMENT

- control of tone of voice and body language
 - Machine settings** may include:
 - measurement
 - setting equipment to stops, fences, angles, depths, feeds or speeds
 - Disposing of** may include:
 - recycling rejected material machined during the trial run
 - re-using rejected material machined during the trial run
 - Pre start-up checks** are conducted to ensure:
 - equipment has been set-up correctly
 - blades, knives, drills or sanding belts are installed accurately
 - machinery is operating to optimum performance
 - Output** is the speed or rate at which material is machined
 - Stacking** may include:
 - preparing for transport
 - categorising in common size, length and angle
 - marking lots in line with work order and site requirements
 - locating so as not to block access or passage
 - Waste** may include:
 - off-cuts
 - shavings
 - sawdust
 - dust
 - swarf
 - Records and reports** may include:
 - the machining method
 - product type
 - size
 - inspection
 - storage locations
 - quality outcomes
 - hazards
 - incidents or equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber
Merchandising

FPITMM2203A Read and interpret timber truss, floor and/or frame fabrication plans

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to read and interpret truss, floor and/or frame fabrication plans showing construction details and component specifications

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves reading and interpreting truss, floor and/or frame fabrication plans in a forest products factory setting to produce prefabricated trusses, floors and/or frames to specifications

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Clarify and review fabrication plans	<p>1.1.Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational</i> requirements relevant to reading and interpreting timber truss, floor and/or frame fabrication plans are identified and followed</p> <p>1.2.<i>Work order</i> and fabrication plans are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3.Drawing views and notes are interpreted and design requirements and restrictions are identified and complied with</p> <p>1.4.Additional information and data is obtained from appropriate personnel and sources if required</p> <p>1.5.<i>Communication</i> with others is established and maintained in line with OHS and organisational requirements</p>
2. Interpret and read fabrication plans	<p>2.1.Plans, work requirements and sequencing are identified, interpreted and applied to <i>assembling components</i></p> <p>2.2.Layouts, spacing and sizing of individual structural members are confirmed in line with work order requirements</p> <p>2.3.Quantities for bracing and ancillaries for trusses or</p>

ELEMENT**PERFORMANCE CRITERIA**

- frames are allowed for
- 2.4. **Timber component** information and details are interpreted from plan documentation
- 2.5. **Hardware** information and details are interpreted from plan documentation
- 2.6. **Bracing points** are correctly identified, located and labelled from plan documentation
- 2.7. The need for **camber** is established and identified
3. Confirm work order and fabrication plan
- 3.1. **Set-up jigs** required for construction are identified and prepared
- 3.2. Truss, floor or frame types are identified and timber type and species selected in line with work order
- 3.3. Assembly hardware is located and selected in line with the fabrication plans and standards
- 3.4. Characteristics and **design details** of material are visually assessed against work order
- 3.5. Sub-standard materials are rejected and disposed of in line with site requirements to minimise wastage
- 3.6. Common site problems are discussed and prevention strategies examined and adopted to ensure future site practice meets design requirements
4. Confirm products to fabrication plan
- 4.1. Components are set to include camber adjustments, overhang and other design requirements
- 4.2. Hardware is positioned on joints and installed in line with design specifications
- 4.3. Assembly faults are corrected in line with site procedures
- 4.4. Finished product is assessed for quality against assembly drawing and labelled in line with the work order
- 4.5. Assessment outcomes and distribution problems are recorded and reported in line with workplace procedures
- 4.6. **Records and reports** are accurately completed, processed and maintained in line with workplace procedures
- 5.
- 6.

- 7.
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- 20.
- 21.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to measure and check length and angle of components; identify a range of timber products, sizes and specifications; and identify a range of nail plate products, sizes and specifications
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to read and interpret timber truss, floor and/or frame plans
- Numeracy skills sufficient to measure and calculate length and angles including basic addition and subtraction
- Problem solving skills sufficient to identify and resolve potential fabrication plan problems
- Planning and organisational skills sufficient to develop a logical construction sequence to construct trusses, frames and/or floors from the plan

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for reading and interpreting timber truss, floor and/or frame plans
- Organisational and site standards, requirements, policies and procedures relevant to reading and interpreting timber truss, floor and/or frame plans

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material
- Knowledge of a range of appropriate truss, floor and/or frame types and components
- Understanding of relevant abbreviations and symbols and industry terminology used in fabrication plans
- Workplace communication channels to resolve any potential fabrication issues
- Appropriate units of measurement and component tolerances in use at the work site
- Industry standard cross sections and lengths
- Characteristics of timber and timber defects
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment for reading and interpreting truss, floor and frame fabrication plans and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can read and interpret a range of timber truss, floor and/or frame fabrication plans

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to reading and interpreting timber truss, floor and/or frame plans
- following organisational policies and procedures

EVIDENCE GUIDE

- relevant to reading and interpreting timber truss, floor and/or frame plans
- Context of and specific resources for assessment**
- development of a logical construction sequence for a range of products from the fabrication plans
 - Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to comply with relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards

RANGE STATEMENT

- confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the assembly and despatch of timber and timber products from the work site
- and may include:
- fabrication plans or drawings
 - type of product
 - size
 - quantity
 - grade
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm

RANGE STATEMENT

- understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Assembling components** for timber truss, floor and frame may include:
- design assumptions regarding supporting and tying components
- Timber components**
- are the sections of timber or timber product which have been pre-cut in readiness for assembly and have been cut to comply with the fabrication plans and cutting list
- Hardware** may include:
- nailing plates
 - floor truss plates
 - bracing
 - supplementary fittings and fixings
- Bracing points**
- are the points at which timber, ply or metal are attached to truss or frame to prevent lateral movement
- Camber**
- is an upward curvature built into a truss to compensate for roof load
- Set-up jigs** may include:
- enterprise manufactured templates which assist in the positioning of components to corresponding work order during the assembly process
- Design details** may include:
- timber component species
 - type
 - cross-section
 - grade
 - length and cutting angles
 - nail plate and other joining hardware sizes and marking requirements
- Records and reports** may include:
- product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents or equipment malfunctions

RANGE STATEMENT

and may be:

- manual
- using a computer-based system
- other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM3201B Convert timber

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare and re-saw material to width and on the thickness with a power driven saw to optimise timber conversion and usability. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM3201A Convert timber

Application of the Unit

Application of the unit This unit involves converting timber in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for conversion	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>converting timber</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be converted is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Timber conversion and <i>saw set-up</i> are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Produce boards	<p>2.1. Saw, carriage and feed are set, regularly checked and adjusted to suit conversion plan, <i>ordered sizes</i> and <i>tolerances</i></p> <p>2.2. Timber supply is monitored to ensure constant</p>

ELEMENT	PERFORMANCE CRITERIA
	supply to the saw
	2.3. Equipment and machinery are used in line with organisational procedures, manufacturer's instructions and environmental protection requirements
	2.4. Saw bench is operated to produce boards without damage to boards or saw blade and <i>feed rate</i> is maintained
	2.5. Material with <i>defects</i> , incorrect cuts and off-cuts is <i>disposed of</i> in line with site procedures and environmental requirements
	2.6. Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel
	2.7. Material is safely <i>stacked</i> in a designated location in line with work order requirements
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. Saw blades are checked for blunt or damaged condition in line with site requirements
	3.3. Saw blades are removed and replaced in line with manufacturer's recommendations
	3.4. Saw area is kept clear of dust, off-cuts and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; safely convert timber
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to measure and calculate length and angles including basic addition and subtraction
- Problem solving skills sufficient to identify problems and equipment faults and

REQUIRED SKILLS AND KNOWLEDGE

demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for converting timber
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures relevant to converting timber
- Environmental risks and hazards
- Characteristics of timber and timber defects
- Cutting patterns and sequences
- Saw feed rates
- Saw blade condition assessment
- Industry standard cross-sections and lengths
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently convert timber within organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to converting timber
- following organisational policies and procedures relevant to converting timber
- effectively communicating and following safe working practices
- cutting material to width and thickness in line with the work order and within prescribed organisational tolerances
- conducting operator maintenance on a automatic feed controlled rip saw
- stacking batches of cut material in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required

EVIDENCE GUIDE

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
 - elimination of hazardous materials and substances
 - safe forest practices including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

Timber conversion

is the process of producing boards by:

- re-sawing in-the-rough boards to optimise single boards through cutting away waste edges
- cutting boards into two or more boards thereby maximising the amount of product in line with the work order

Work order is to include:

- instructions for the cutting and despatch of timber and timber products from the work site

and may include:

- type
- size
- width
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- green timber
- stress and non-stress graded timber,
- preservative treated timber
- coated and/or treated timber products
- beams or laminated beams

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components

RANGE STATEMENT

- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- measuring equipment
- power operated
- automatic feed controlled ripping saws where the cut is controlled relative to the board guides and fence
- saws with adjustable thickness (sloping table)
- saws with one blade
- rip saws
- table saws
- bench saws

and is to include procedures for:

- saw lock-out, i.e. protecting operators and co-workers from accidental injury by isolating the machine from the power source

Saw set-up is to include:

- setting depth, width and thickness of cut measured from the fence in line with product order and allowing for kerf (width of saw cut)

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Ordered sizes may include:

- a range of sizes cut to widths usually

RANGE STATEMENT

increasing in 5 mm increments

Tolerances

are a set limit for cutting over or under the required width within a set margin of acceptance usually + or - 0.5 mm or in line with order or organisational requirements

Feed rate

is the rate of speed at which the material is passed through the machine affecting the sharpness of the cutting blades, the finish of the material and the production output

Defects may include:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling material with defects, incorrect cuts and off-cuts
- re-using material with defects, incorrect cuts and off-cuts

Records and reports may include:

- product type
- size
- width
- thickness
- inspection, grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents or equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Stacking may include:

- preparing for transport
- categorising in common size, length, width and thickness
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM3202B Manufacture using joinery machines

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare, cut and drill machined joints in timber using mortise and tenon machines, borers and routers

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM3202A Manufacture using joinery machines

Application of the Unit

Application of the unit This unit involves using joinery machines to manufacture material in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for profiling	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to manufacturing <i>machined joints</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be <i>machined</i> is selected from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Material to be manufactured and process to be used are identified and <i>cutting blades or drills</i> selected</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set up profiling equipment	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Machine guides</i> are selected and attached to the machinery</p>

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|---------------------------------|---|
| 3. Cut material to profile | <p>2.3. Cutting blades or drills are installed in the selected machinery</p> <p>2.4. Depth and width of cut or hole are set in line with the required process and to minimise waste</p> <p>2.5. Material stack is positioned in close proximity to maximise ease of machine feeding</p> <p>2.6. Equipment set-up is checked and adjusted by testing a piece of timber to set depth and width</p> <p>3.1. Material is fed into the machine at the <i>feed rate</i> prescribed by organisational requirements</p> <p>3.2. Equipment and machinery are used in line with organisational procedures, manufacturer's instructions and environmental protection requirements</p> <p>3.3. Manufacturing sequence is followed, maintained and adjusted to produce the required quantity and maximise the feed rate</p> <p>3.4. Manufacturing process is regularly checked and adjusted to maintain the desired depth and width</p> <p>3.5. Material with <i>defects</i> is rejected and <i>disposed of</i> in line with site procedures</p> <p>3.6. Processing and equipment faults are reported to the appropriate personnel</p> <p>3.7. Material is safely <i>stacked</i> in a designated location in line with work order requirements</p> <p>3.8. <i>Records and reports</i> are accurately completed, processed and maintained in line with workplace procedures</p> |
| 4. Conduct operator maintenance | <p>4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>4.2. Cutting blades or drills are checked for blunt or damaged condition in line with site procedures</p> <p>4.3. Cutting blades or drills are removed and replaced in line with manufacturer's recommendations</p> <p>4.4. Machine area is kept clear of dust and debris in line with OHS requirements</p> |

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and safely manufacture using joinery machines
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task and to calculate length, angle, depth and width including basic addition and subtraction
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for manufacture using joinery machines
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures relevant to manufacture using joinery machines
- Environmental risks and hazards
- Types of machined joints
- Characteristics of timber and timber defects
- Cutting processes, feed rates and finish
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they safely and efficiently manufacture material using joinery machines within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to manufacturing material using joinery machines
- following organisational policies and procedures relevant to manufacturing material using joinery machines
- effectively communicating and following safe working practices
- cutting and drilling machined joints in line with the work order and within prescribed organisational specifications
- conducting operator maintenance on joinery machine equipment
- stacking batches of cut material in line with organisational requirements and OHS regulations
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to

Context of and specific resources for assessment

EVIDENCE GUIDE

undertaking work applicable to this unit

- specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating

RANGE STATEMENT

conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility

RANGE STATEMENT

- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Machined joints may include:

- grooves - square u-shape slots of varying depth and width which run with the grain along the length of the board, generally used for joining or receiving another piece of timber
- rebates - vary in depth and width and occur at the edge or end of boards to accept another piece of timber to fit flush with the end or edge
- bevels - angles of varying degree cut on the edge or end of boards at the full thickness of the board for joining or decorative purposes
- trenches - cut across the grain and board at varying depths and widths to join and receive other timber components
- mortises - square or rectangular slots cut through timber or cut to a depth to receive a timber tenon
- tenons - cut at the end of a piece of timber at both edges and one or both flats to form a pin which can in turn fit a mortise, for joining purposes
- holes - drilled or bored completely through or stopped blind to accept dowels or metal joining hardware

Work order is to include

- instructions for the cutting or drilling and despatch of timber and timber products from the work site

and may include:

- machining process
- type

RANGE STATEMENT

- size
- length
- width
- thickness
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board
- coated and/or treated timber products
- beams or laminated beams

Machining is to include:

- drilling
- boring
- mortising
- tenoning
- trenching
- grooving
- rebating
- bevelling
- routing

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks

RANGE STATEMENT

- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- measuring equipment
- saws
- routing machines
- single or double end tenoners
- mortisers
- borers
- multi-borers
- drill presses

and is to include:

- procedures for machine lock-out, i.e. protecting operators and co-workers from accidental injury by isolating the machine from the power source

Cutting blades and drills may include:

- router cutting bits which cut square or angular
- drills in varying sizes
- mortising chisels
- tenoning saws or chains
- trenching heads

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to

RANGE STATEMENT

- individual social and cultural differences
- control of tone of voice and body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly
- cutters or drills are installed accurately
- machinery is operating to optimum performance

Machine guides may include:

- machine manufacturer produced guides located strategically on the machine to maintain timber in straight feed and ensure consistency of cut
- enterprise produced guides
- jigs to maintain consistency of timber against cutting blades or drills

Feed rate is to include:

- the rate of speed at which the material is passed through the machine affecting the sharpness of the cutting blades
- the finish of the material
- the production output

Defects may include:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling material with defects
- re-using material with defects

Stacking may include:

- preparing for transport
- categorising in machining process
- common size, length and angle
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Records and reports may include:

- product type
- size
- process
- inspection
- grading and labelling outcomes
- storage locations

RANGE STATEMENT

- quality outcomes
- hazards
- incidents or equipment malfunctions
- and may be: manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM3203B Estimate and cost job

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to estimate materials, labour and time requirements and establish costs for provision of services or products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM3203A Estimate and cost job

Application of the Unit

Application of the unit

This unit involves estimating and costing jobs in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Gather information	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>estimating and costing</i> are identified and followed</p> <p>1.2. Details of customer requirements are obtained through discussion with customer or from information supplied</p> <p>1.3. <i>Product information</i> is assessed and communicated to <i>appropriate personnel</i> in line with customer requirements</p> <p>1.4. Delivery point and methods of <i>transportation</i> are determined in line with organisational procedures and environmental protection requirements</p> <p>1.5. Details are recorded in line with organisational practice</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Estimate materials, time and labour	<p>2.1. Types and quantities of materials required for product manufacture are estimated</p> <p>2.2. <i>Resource requirements</i> to achieve product manufacture and perform required services are</p>

ELEMENT	PERFORMANCE CRITERIA
	estimated
	2.3. Completed estimate for product manufacture is documented and checked to match customer requirements
3. Calculate costs	3.1. Total materials, labour and <i>overhead costs</i> are calculated in line with organisational procedures
	3.2. Total job cost is calculated, including overheads and <i>mark-up percentages</i>
	3.3. Final cost to customer is calculated in line with organisational procedures
4. Check and document details	4.1. Details of costs and charges are documented in line with organisational practice
	4.2. Costs, calculations or other details are checked in line with organisational practice
	4.3. Customer <i>quotation</i> is prepared in line with organisational procedures
	4.4. Details are documented for future reference in line with organisational practice

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to safely estimate and cost materials, labour and overheads
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of

REQUIRED SKILLS AND KNOWLEDGE

- processes for estimating and costing
- Environmental protection requirements, including the safe disposal of waste material and minimising carbon emissions
 - Organisational and site standards, requirements, policies and procedures relevant to estimating and costing
 - Environmental risks and hazards
 - Using energy effectively and efficiently
 - Using material effectively and efficiently
 - Estimating and costing procedures
 - Product knowledge and production procedures
 - Staff salaries and overheads
 - Profit margins
 - Established communication channels and protocols
 - Problem identification and resolution strategies and common fault finding techniques
 - Types of tools and equipment and procedures for their safe use, operation and maintenance
 - Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
 - Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently estimate and cost jobs within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and

EVIDENCE GUIDE

- codes of practice relevant to estimating and costing
- following organisational policies and procedures relevant to estimating and costing
 - effective communication and safe working practices
 - estimating and costing jobs on behalf of the organisation following established procedures
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations,

RANGE STATEMENT

certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- labour
- material
- overheads
- current product range and availability
- making comparisons between products and services related to brand options
- product features
- warranties and price
- knowledge of competitors' products
- service range and pricing structure
- environmental sustainability issues
- supervisor
- manager

Organisational requirements may include:

Estimating and costing is to include:

Product information may include:

Appropriate personnel may

RANGE STATEMENT

include:

- colleagues
- clients
- customers
- suppliers

Transportation may include:

- ships
- trains
- trucks
- utes
- vans
- couriers

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board products
- coated and/or treated timber products
- beams or laminated beams

Resource requirements may include:

- number of personnel to complete the job
- time requirements
- overtime considerations and overheads

Overhead costs may include:

- superannuation
- sick leave entitlements
- leave loading
- other staff entitlements

RANGE STATEMENT

- enterprise overheads
- environmental protection requirements

Mark-up percentage

is the desired or intended profit margin over and above all costs

Quotations

are formally presented costs for producing a product or providing a service to the customer

Unit Sector(s)**Unit sector**

No sector assigned

Co-requisite units**Co-requisite units****Competency field****Competency field**

Timber Manufactured Products and Timber Merchandising

FPITMM3204A Interpret designs to prepare timber roof truss drawings and documents using computers

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit specifies the outcomes required to use computer systems to produce roof truss drawings including details of their fabrication

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves interpreting plans and designs to prepare a limited range of roof truss drawings and production documents using computers in a timber products, production or design setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Prepare to interpret plans or designs | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to interpreting a range of plans and designs to prepare timber <i>roof truss</i> drawings and production documents using computers are identified and followed |
| | 1.2. Information about plans or designs, <i>identified standards, design factors</i> and specifications is gathered |
| | 1.3. <i>Stakeholders</i> are identified and consulted where clarification is needed |
| | 1.4. <i>Drawings and documentation</i> are maintained to identified standards |
| 2. Create roof truss layouts | 2.1. <i>Computer software</i> is checked for currency |
| | 2.2. Design factors and data are input to the software |
| | 2.3. Pitching lines and load bearing points are identified |
| | 2.4. <i>Roof shapes</i> are input and roof truss layout is created |
| | 2.5. Design requirements outside software limitations are referred to appropriate personnel for resolution |

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------------|--|
| 3. Review roof truss layouts | 3.1. Roof trusses are designed and proved against identified standards
3.2. Roof truss designs are reviewed and amended to ensure efficiency is met with respect to <i>available materials</i> and <i>production requirements</i> , while maintaining identified standards
3.3. Design variations are referred to appropriate stakeholders following organisational referral procedures, where design varies from identified standards |
| 4. Create outputs | 4.1. Drawings and documentation are prepared
4.2. Drawings and documentation are communicated and stored, in line with identified standards |
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Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to accurately prepare roof truss drawings and production documents to identified standards using custom software
- Communication skills sufficient to interact with stakeholders

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to locate, interpret and apply relevant information and to accurately record outputs
- Numeracy skills sufficient to select and use appropriate mathematical techniques
- Problem solving skills sufficient to identify problems and appropriately initiate solutions or referral processes

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for the interpretation of plans and designs to prepare timber roof truss drawings and production documents using computers
- Organisational and site standards, requirements, policies and procedures relevant to interpreting plans and designs to prepare a limited range of timber roof truss drawings and production documents using computers
- Environmental protection requirements, including the safe disposal of waste material
- Limits of ability and authority with respect to non-conforming design
- Common industry standard sizes, profiles and spacing dimensions
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment relevant to preparing timber roof truss drawings and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can use computer software to prepare timber roof truss drawings and documents from plans and designs provided

Critical aspects for assessment

The evidence required to demonstrate competency in this unit

EVIDENCE GUIDE

and evidence required to demonstrate competency in this unit

must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to interpreting plans and designs to prepare timber roof truss drawings and production documents using computers
- following organisational policies and procedures relevant to interpreting plans and designs to prepare a limited range of timber roof truss drawings and production documents using computers
- preparation of roof truss drawings and production documents suitable for manufacture of roof trusses

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- management of hazardous materials and substances
- ergonomic office layouts and practice
- manual handling including shifting, lifting and

RANGE STATEMENT

carrying

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- Building Code of Australia
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)
- procedures relating to economical design with respect to production and materials

Roof trusses must include:

- "A" type truss
- truncated standard truss
- girder truss
- truncated girder
- jack truss
- rafter truss
- gable truss
- saddle truss

RANGE STATEMENT

- Roof trusses** may include:
- raking truss
 - parallel chord truss
 - vaulted truss
 - truncated saddle truss
 - scissor truss
- Identified standards** may include:
- Building Code of Australia
 - Australian Standards
 - organisational quality standards
- Design factors** may include:
- roof material loads
 - wind zone and applied loads
 - commercial or residential output
 - additional roof loading
 - post disaster structures
 - roof shape
 - roof lines
- Stakeholders** may include:
- clients
 - builders
 - manager
 - supervisor
 - production staff
 - engineers
 - architects and designers
 - building certifiers
 - software providers
- Drawings and documentation** may include:
- drawing views
 - drawing notes
 - records of conversation
 - records of amendments
 - functional and pictorial images
 - design records
 - component cutting details
- Computer software** must include:
- software capable of developing a design outcome to an identified standard
- Roof shapes** may include
- hipped
 - gabled
 - bowstring
 - mansard
 - skillion
 - dual pitch

RANGE STATEMENT

Available materials may include:

- bell
- timber dimensions, grades and treatments
- nail plate and other hardware dimensions

Production requirements may include:

- plant availability
- labour availability
- production schedules

Unit Sector(s)

Not Applicable

Competency field

Competency field

Timber Manufactured Products and Timber Merchandising

FPITMM3205A Interpret designs to prepare timber floor system drawings and documents using computers

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit specifies the outcomes required to use computer systems to produce timber floor system drawings including details of their fabrication

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves interpretation of plans and designs to prepare a limited range of timber floor system drawings and production documents using computers in a timber products production or design setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Prepare to interpret plans or designs | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to interpreting a range of plans and designs to prepare timber <i>floor system</i> drawings and production documents using computers are identified and followed |
| | 1.2. Information about plans or designs, <i>identified standards, design factors</i> and specifications is gathered |
| | 1.3. <i>Stakeholders</i> are identified and consulted where clarification is needed |
| | 1.4. <i>Drawings and documentation</i> are maintained to identified standards |
| 2. Create floor system layouts | 2.1. <i>Computer software</i> is checked for currency |
| | 2.2. <i>Applied loads</i> and data are input to the software |
| | 2.3. Load transfers and load bearing points are identified |
| | 2.4. Floor areas are input and floor system layouts are created |
| | 2.5. Design requirements outside software limitations are referred to appropriate personnel for resolution |

ELEMENT	PERFORMANCE CRITERIA
3. Review floor system layouts	<p>3.1.Floor systems are designed and proved against identified standards</p> <p>3.2.Floor system designs are reviewed and amended to ensure efficiency is met with respect to <i>available materials</i> and <i>production requirements</i>, while maintaining identified standards</p> <p>3.3.Where designs vary from identified standards, organisational referral procedures to appropriate stakeholders are followed</p>
4. Create outputs	<p>4.1.Drawings and documentation are prepared</p> <p>4.2.Drawings and documentation are communicated and stored, in line with identified standards</p>
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Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to accurately prepare timber floor system drawings and production documents to identified standards using custom software
- Communication skills sufficient to interact with stakeholders
- Literacy skills sufficient to locate, interpret and apply relevant information and to

REQUIRED SKILLS AND KNOWLEDGE

accurately record outputs

- Numeracy skills sufficient to select and use appropriate mathematical techniques
- Problem solving skills sufficient to identify problems and appropriately initiate solutions or referral processes

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for the interpretation of plans and designs to prepare timber floor system drawings and production documents using computers
- Organisational and site standards, requirements, policies and procedures relevant to interpreting plans and designs to prepare timber floor system drawings and production documents using computers
- Environmental protection requirements, including the safe disposal of waste material
- Limits of ability and authority with respect to non-conforming design
- Common industry standard sizes, profiles and spacing dimensions
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment relevant to preparing timber floor system drawings and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can use computer software to prepare timber floor system drawings and documents from plans and designs provided

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to interpreting plans and designs to prepare timber floor system drawings and production documents using computers
- following organisational policies and procedures relevant to interpreting plans and designs to prepare timber floor system drawings and production documents using computers
- preparation of floor system drawings and production documents suitable for manufacture of floor systems

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- ergonomic office layouts and practice
- management of hazardous materials and substances
- elimination of hazardous materials and

RANGE STATEMENT

substances

- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- Building Code of Australia
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Floor systems may include:

- webbed truss
- I-beams
- solid timber sections
- laminated beams

Identified standards may include:

- Building Code of Australia
- Australian Standards
- organisational quality standards

RANGE STATEMENT

Design factors may include:

- roof material loads
- wind zone and applied loads
- commercial or residential output
- additional roof loading
- post disaster structures
- roof shape
- roof lines

Stakeholders may include:

- clients
- builders
- manager
- supervisor
- production staff
- engineers
- architects and designers
- building certifiers
- software providers

Drawings and documentation may include:

- drawing views
- drawing notes
- records of conversation
- records of amendments
- functional and pictorial images
- design records
- component cutting details

Computer software must include:

- software capable of developing a design outcome to an identified standard

Applied loads may include:

- floor material
- wind zone and applied loads
- commercial or residential output
- additional floor loads
- post disaster structures

Available materials may include:

- timber dimensions, grades and treatments
- nail plate and other hardware dimensions

Production requirements may include:

- plant availability
- labour availability
- production schedules

Unit Sector(s)

Not Applicable

Competency field

Competency field Timber Manufactured Products

FPITMM3206A Interpret designs to prepare timber wall frame drawings and documents using computers

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit specifies the outcomes required to use computer systems to produce timber wall frame drawings including details of their fabrication

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves the interpretation of plans and designs to prepare a limited range of wall frame drawings and production documents using computers in a timber products production or design setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Prepare to interpret plans or designs | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to interpreting a range of plans and designs to prepare timber <i>wall frame</i> drawings and production documents using computers are identified and followed |
| | 1.2. Information about plans or designs, <i>identified standards, design factors</i> and specifications is gathered |
| | 1.3. <i>Stakeholders</i> are identified and consulted where clarification is needed |
| | 1.4. <i>Drawings and documentation</i> are maintained to identified standards |
| 2. Create wall frame layouts | 2.1. <i>Computer software</i> is checked for currency |
| | 2.2. <i>Applied loads</i> and data are input to the software |
| | 2.3. Wall frame layouts are created |
| | 2.4. Structural members outside software limitations are referred to appropriate personnel |
| 3. Review wall frame layouts | 3.1. Wall frames are designed and proved against identified standards |

ELEMENT

PERFORMANCE CRITERIA

- 3.2. Wall frame designs are reviewed and amended to ensure maximum efficiency of *available materials* and *production requirements*, while maintaining identified standards
- 3.3. Design variations are referred to appropriate stakeholders and organisational referral procedures are followed, where design varies from identified standards
4. Create outputs
 - 4.1. Drawings and documentation are prepared
 - 4.2. Drawings and documentation are communicated and stored, in line with identified standards
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
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- 15.
- 16.
- 17.
- 18.
- 19.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to accurately prepare wall frame drawings and production documents to identified standards using custom software
- Communication skills sufficient to interact with stakeholders
- Literacy skills sufficient to locate, interpret and apply relevant information and to accurately record outputs

REQUIRED SKILLS AND KNOWLEDGE

- Numeracy skills sufficient to select and use appropriate mathematical techniques
- Problem solving skills sufficient to identify problems and appropriately initiate solutions or referral processes

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for the interpretation of plans and designs to prepare wall frame drawings and production documents using computers
- Organisational and site standards, requirements, policies and procedures relevant to the interpretation of plans and designs to prepare timber wall frame drawings and production documents using computers
- Environmental protection requirements, including the safe disposal of waste material
- Limits of ability and authority with respect to non-conforming design
- Common industry standard sizes, profiles and spacing dimensions
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment relevant to preparing wall frame drawings and production documents and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can use computer software to prepare timber wall frame drawings and documents from plans and designs provided

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory

EVIDENCE GUIDE

Context of and specific resources for assessment

legislative and regulatory requirements and codes of practice relevant to interpreting plans and designs to prepare timber wall frame drawings and production documents using computers

- following organisational policies and procedures relevant to interpreting plans and designs to prepare timber wall frame drawings and production documents using computers
- preparation of wall frame drawings and production documents suitable for the manufacture of wall frames
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- ergonomic office layouts and practice
- management of hazardous materials and substances
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification

RANGE STATEMENT

requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- Building Code of Australia
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Wall frames may include:

- standard
- raking
- fire rated

Identified standards may include:

- Building Code of Australia
- Australian Standards
- multi-residential framing code
- organisational quality standards

Design factors may include:

- wall heights
- lintel requirements
- claddings
- framing codes
- door and window locations
- fire rating

RANGE STATEMENT

Stakeholders may include:

- clients
- builders
- manager
- supervisor
- production staff
- engineers
- architects and designers
- building certifiers
- software providers

Drawings and documentation may include:

- drawing views
- drawing notes
- records of conversation
- records of amendments
- functional and pictorial images
- design records
- component cutting details

Computer software must include:

- software capable of developing a design outcome to an identified standard

Applied loads may include:

- roof loads
- wind zone
- commercial or residential output
- additional floor loading
- post disaster structures

Available materials may include:

- timber dimensions, grades and treatments
- nail plate and other hardware dimensions

Production requirements may include:

- plant availability
- labour availability
- production schedules

Unit Sector(s)

Not Applicable

Competency field

Competency field

Timber Manufactured Products

FPITMM3207A Set up timber floor trusses

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and set up the assembly of timber floor trusses using a purpose built jig or computer-operated truss table, and oversee the operation of the truss press

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves setting up and producing floor trusses in a timber and wood products production environment

It may be applied at either a truss/frame fabrication facility or timber merchants facility

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	<p>1.1.Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational</i> requirements relevant to assembling <i>timber floor trusses</i> are identified and followed</p> <p>1.2.<i>Work order</i> and construction plans are reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3.Type and quantity of <i>material</i> to be assembled and <i>assembly hardware</i> is collected</p> <p>1.4.<i>Tools and equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5.<i>Set-up table or jigs</i> required for construction are identified and prepared</p> <p>1.6.<i>Communication</i> with others is established and maintained in line with OHS and organisational requirements</p>
2. Set up floor truss	<p>2.1.Product size and number of joints are assessed with table or jig area, and sections and layout are planned</p> <p>2.2.<i>Timber components</i> are selected from pre-cut material in line with the cutting list and are checked for fit</p>

ELEMENT**PERFORMANCE CRITERIA**

- 2.3. *Steel web components* are selected in line with the construction plans and standards
- 2.4. Jig components are positioned to accurately locate and support the assembly components and jig or table is adjusted to suit
- 2.5. Components are positioned and clamped in jigs ready for joining with allowable faults, joints and grain in line with construction standards and grading rules
- 2.6. Components are set to include overhang and other design requirements, including camber if specified
- 2.7. *Webs* are set up to nominated pattern configuration
- 2.8. *Defective components* are identified and disposed of or recycled in line with site procedures
- 2.9. Components are clamped and/or nailed to maintain temporary alignment during assembly
3. Control pressing operations
- 3.1. Hardware is positioned on joints and installed in line with design specifications
- 3.2. Truss-pressing operations are coordinated to ensure finished product complies with customer orders
- 3.3. *Assembly faults* are corrected in line with site procedures
4. Prepare products for despatch and report
- 4.1. Finished product is assessed for quality against construction standards and labelled in line with the work order
- 4.2. Components are removed from table or jigs and safely *stacked* in a designated location in line with work order requirements
- 4.3. Finished products are *strapped*, packed and labelled ready for transportation
- 4.4. Equipment faults are recognised and reported in line with site procedures
- 4.5. Records and reports are accurately completed, processed and maintained in line with site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to set up and fix timber floor truss components, pack, stack and strap components for despatch
- Communication skills sufficient to read and interpret plans and drawings, complete and process production records and label products for despatch
- Literacy skills sufficient to read and interpret plans and process production records
- Numeracy skills sufficient to estimate timeframes for job completion and number and types of components needed to produce floor trusses
- Problem solving skills sufficient to identify and rectify non-compliant product
- Planning and organisational skills sufficient to plan assembly sequences and jig operation

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for setting up timber floor trusses
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for setting up floor trusses
- Characteristics of timber and timber defects
- Assembly sequences and jig operation
- Assembly, componentry and construction standards
- Quality requirements of national building codes and standards
- Industry standard cross-sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment for setting up timber floor trusses and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can plan and set up the assembly of timber floor trusses using a purpose built jig or computer-operated truss table, and oversee the operation of the truss press

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to setting up timber floor trusses
- following organisational policies and procedures relevant to setting up timber floor trusses
- safely setting up a timber floor truss jig
- safely conducting pressing operations as per work orders

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and

RANGE STATEMENT

may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- fatigue management
- hazard identification and risk control
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

RANGE STATEMENT

Timber floor trusses

- are jointed structures designed to act as a beam of long span, while each member is usually subjected to gravity, dead and live loads

and may include:

- joists
- purlins
- chords
- beams

Work order is to include:

- instructions for the assembly and despatch of timber and timber products from the work site and

and may include:

- construction plans or drawings
- type of product
- size
- quantity
- grade

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- laminated veneer
- coated and/or treated timber products
- beams or laminated beams

Assembly hardware may include:

- nailing plates
- floor truss spacers and bracing
- nail gun nails and staples

Tools and equipment may include:

- measuring equipment
- electric circular saws
- docking saws
- drills

RANGE STATEMENT

- assembly jigs
 - assembly table
 - nail plate presses
 - staple guns
 - nail guns
 - compressor or compressed air supply
 - marking equipment
 - strapping equipment
- Set-up table/ jigs:**
- are enterprise manufactured templates and structures which assist in the positioning of components during the assembly process
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Timber components**
- are the sections of timber or timber product which have been pre-cut in readiness for assembly and have been cut to comply with the construction plans and cutting list
- Steel web components**
- are V shaped steel tension web members
- Webs**
- are truss internal supports - arranged symmetrically
- Defective components** may include components with an unacceptable level of:
- warp
 - wane/want
 - cupping
 - shakes
 - spring
 - bow
 - splits
 - insect defects
 - knots
 - resin pockets

RANGE STATEMENT

Assembly faults may include:

- incorrectly positioned joints
- timber splits from nailing
- incorrectly positioned hardware

Stacking may include:

- preparation for transport
- categorising in common size and shape
- marking lots in line with work order and site procedures and located so as not to block access or passage

Strapping

- is securing bundles with metal or plastic strap and tightening and tensioning using hand held equipment to prevent slippage without risk of strap breakage or damage to products

Unit Sector(s)

Not Applicable

Competency field

Competency field Timber Manufactured Products

FPITMM4201B Construct prototypes and samples

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and construct prototypes and samples in line with established plans, drawings or other specifications for the purpose of testing product viability and construction methods

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM4201A Construct prototypes and samples

Application of the Unit

Application of the unit

This unit involves constructing prototypes and samples in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for construction	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to constructing prototypes and samples are identified and followed</p> <p>1.2. <i>Prototype</i> purpose, <i>work order</i> and construction plans are produced and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> and <i>assembly hardware</i> to be constructed are collected</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Stages</i> of the construction process are planned and documented</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set up components	<p>2.1. <i>Set-up jigs</i> required for construction are specified and prepared</p> <p>2.2. <i>Timber components</i> are selected, checked for</p>

ELEMENT**PERFORMANCE CRITERIA**

- compatibility with the specifications and cut in line with the prototype plans
- 2.3. Components are positioned and clamped in jigs ready for joining with allowable faults, joints and grain in line with construction standards and grading rules
- 2.4. **Defective components** are rejected and **disposed of** in line with site procedures and environmental requirements
- 2.5. Timber that is cut incorrectly and off-cuts are disposed of in line with site procedures and environmental requirements
- 2.6. Components are stapled to maintain temporary alignment during construction
3. Construct prototype
- 3.1. Construction plan is followed to construct the item
- 3.2. Assembly hardware is located and selected in line with the prototype construction plans and specifications
- 3.3. Checks are conducted at designated points in construction
- 3.4. Hardware is positioned on joints and installed, following prototype specifications
- 3.5. **Temporary bracing** is nailed or stapled to the product in line with construction standards
- 3.6. **Modifications** to designs and plans are detected and recommended within workplace procedures
- 3.7. **Construction faults** are corrected and prototype plans modified
- 3.8. Modifications to the plan are documented and followed
- 3.9. Prototype or sample is checked for effectiveness and timeliness of construction to suit the purpose
- 3.10. Prototype development processes and problems are **recorded and reported** to the appropriate personnel
- 3.11. When no longer required, temporary bracing, prototypes and samples are stored or disposed of in line with site procedures and environmental requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and safely construct prototypes and samples
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate length and angles including basic addition and subtraction and to calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for constructing prototypes and samples
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures relevant to constructing prototypes and samples
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of timber and timber defects
- Products and their use
- Construction sequences and jigs
- Construction componentry and construction standards
- Industry standard cross-sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies and fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently construct prototypes and samples within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to constructing prototypes and samples
- following organisational policies and procedures relevant to constructing prototypes and samples
- effective communication and safe working practices
- constructing prototypes and samples in line with construction plans, drawings and specifications to follow construction standards
- assessing prototype success with accepted development times, organisational production procedures and product purpose

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to

EVIDENCE GUIDE

Method of assessment

- undertaking work applicable to this unit
- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating

RANGE STATEMENT

conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility

RANGE STATEMENT

- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Prototypes may include:

new designs for:

- pallets
- crates
- trellises
- trusses
- stairs
- doors
- windows
- frames
- beams
- new product development

Work order is to include:

- instructions for the construction and testing of new timber products from the work site

and may include:

- construction plans or drawings
- type of product
- size
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

RANGE STATEMENT

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard,
- fibreboard and other manufactured board products
- coated and/or treated timber products
- beams or laminated beams

Assembly hardware is to include:

- nailing plates
- and may include:

- gang nails
- nail gun nails
- staples

Equipment may include:

- measuring equipment
- assembly jigs
- nail plate presses
- staple guns
- nail guns
- compressor or compressed air supply
- marking equipment
- strapping equipment

Stages

are the development phases of the new prototype, allowing review for each process and modification

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Set-up jigs

- are the organisation's manufactured templates

RANGE STATEMENT

which assist in the positioning of components during the assembly process

- are usually newly developed as part of the prototype development process

Timber components

are the sections of timber or timber product which are cut in readiness for assembly and have been cut to follow the construction plans and specifications

Defective components may include:

- components with an unacceptable level of :
 - warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets

Disposing of may include:

- recycling material with defective components; timber that is cut incorrectly, off-cuts; temporary bracing, prototypes or samples no longer required
- re-using material with defective components; timber that is cut incorrectly, off-cuts; temporary bracing, prototypes or samples no longer required

Temporary bracing

may be fixed to secure the assembled product in alignment and square during transportation, moving and positioning on site

Modifications may include:

- changing aspects of the prototype plans, drawings and specifications to facilitate acceptable construction methods, standard component sizes or to rectify and overcome a construction fault

Construction faults may include:

- incorrectly positioned joints
- timber splits from nailing
- incorrectly positioned hardware

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations

RANGE STATEMENT

- quality outcomes
- hazards
- incidents
- equipment malfunctions
- and may be:
- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM4202B Diagnose and calculate production costs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to estimate materials, labour and time requirements and establish costs for the provision of products, including all overheads

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM4202A Diagnose and calculate production costs

Application of the Unit

Application of the unit This unit involves the diagnosis and calculation of production costs in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Gather and diagnose information	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to diagnosing and calculating production costs are identified and followed</p> <p>1.2. Details of the particular <i>product</i> and <i>competitor's products</i> are obtained</p> <p>1.3. Details of the proposed production operation are obtained and analysed</p> <p>1.4. <i>Labour unit cost</i> projections are obtained and agreed</p> <p>1.5. <i>Logistic support contracts</i>, supply agreements or equivalent are obtained and analysed</p> <p>1.6. Details of proposed warehousing, <i>physical distribution systems</i> and related cost factors are obtained</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Estimate materials and labour	<p>2.1. Types and quantities of <i>material</i> required for production are estimated and recorded</p> <p>2.2. <i>Time requirements</i> for production activities and</p>

ELEMENT	PERFORMANCE CRITERIA
3. Calculate costs and overheads	<p>other lead times are estimated</p> <p>2.3.Labour requirements for direct production and handling operations are estimated and recorded</p> <p>3.1.Components contributing to <i>overhead costs</i> are determined</p> <p>3.2.Overhead costs to be attributed to work in line with commercial and organisational procedures are determined</p> <p>3.3.Total materials and labour costs are calculated in line with organisational procedures</p> <p>3.4.Total production cost is calculated, including overheads and <i>mark-up percentages</i></p> <p>3.5.Final cost to customer is calculated in conjunction with marketing and sales personnel</p> <p>3.6.Cost calculation processes and problems are <i>recorded and reported to appropriate personnel</i></p>
4. Check and document details	<p>4.1.Details of costs and charges are documented in line with organisational practice</p> <p>4.2.Costs, calculations or other details are checked by other organisational personnel</p> <p>4.3.Details are documented for future reference in line with organisational practice</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, safely diagnose and calculate production costs
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate and calculate costs for materials, labour and overheads
- Problem solving skills sufficient to identify problems and equipment faults and

REQUIRED SKILLS AND KNOWLEDGE

demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for diagnosing and calculating production costs
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures relevant to diagnosing and calculating production costs
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Material and labour costs
- Overhead costs
- Production and associated costs
- Construction methods and construction standards
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and effectively diagnose and calculate production costs within organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to diagnosing and calculating production costs
- following organisational policies and procedures relevant to diagnosing and calculating production costs
- effective communication and safe working practices
- diagnosing and calculating production costs in line with organisational requirements

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions

RANGE STATEMENT

- relating to forest fire
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Environmental requirements** may include:
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Products** may include:
- pallets
 - crates
 - trellises
 - trusses
 - stairs

RANGE STATEMENT

- doors
- windows
- frames
- beams

Competitor's products: are products that compete directly with those produced by the organisation

Labour costs may include:

- number of personnel to complete the job
- amount of time to complete the job
- overtime considerations
- overheads
- environmental protection requirements

Logistic support contracts are to include:

- external companies who provide products and services to assist in the production process
- internal sections of the organisation that provide products and services to assist in the production process

Physical distribution systems are the methods and systems for distributing materials and products to and from the production area and from there to the warehouse or storage area

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard,
- fibreboard and other manufactured board

RANGE STATEMENT

products

- coated and/or treated timber products
- beams or laminated beams

Time requirements are to include: the amount of time required to complete a:

- product
- task
- project

Overhead costs may include:

- rental or lease costs
- utilities
- non-production resources
- depreciation of plant and equipment
- warehousing margins
- physical distribution unit costs
- insurance and other costs incurred by doing business
- superannuation
- sick leave entitlements
- leave loading
- other staff entitlements
- organisational overheads
- environmental protection requirements

Mark-up percentage: is the desired or intended profit margin over and above all costs

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents or equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Appropriate personnel may include:

- supervisors
- suppliers
- clients

RANGE STATEMENT

- colleagues
- managers

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM4203B Install and commission CNC software

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit specifies the outcomes required to install and commission computer numerically controlled (CNC) processes and machine control programs for CNC sizing machines and CNC machining and processing centres

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM4203A Install and commission CNC software

Application of the Unit

Application of the unit

This unit involves installing and commissioning CNC software in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for software installation	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>installing and commissioning CNC software</i> are identified and followed</p> <p>1.2. <i>Program format</i> and operational purpose are accurately diagnosed and specified applications identified</p> <p>1.3. Specifications are checked for intended operating conditions</p> <p>1.4. Program instructions are checked for compliance with specifications</p> <p>1.5. <i>Software timers</i> are counter set to specification</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Install automatic process machine control programs	<p>2.1. Appropriate program loading technique is selected</p> <p>2.2. <i>External loading devices</i> are correctly connected to automatic process <i>machine control system</i></p> <p>2.3. Machine control system is placed in correct</p>

ELEMENT	PERFORMANCE CRITERIA
	operational mode to accept program loading
	2.4. Program is downloaded in line with manufacturer's recommended procedure and enterprise requirements
	2.5. Checks are made during and after downloading to ensure accurate and complete data transfer
	2.6. External program loading devices and connections are disconnected from process and machine control system
3. Commission automatic process and machine control program	3.1. Operation of the equipment using the program is monitored for accuracy and safe performance
	3.2. Outputs are checked and measured for compliance with specifications
	3.3. External inputs are checked for compliance with specifications, in line with specified procedures
	3.4. Total operation is checked for compliance with specifications
	3.5. Location of program master copy storage is identified
	3.6. Installation and commissioning process and equipment faults are recorded and reported to appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, safely install and commission CNC software
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for installing and commissioning CNC software
- Environmental protection requirements, including the safe disposal of waste material and minimising carbon emissions
- Organisational and site standards, requirements, policies and procedures relevant to installing and commissioning CNC software
- Environmental risks and hazards
- Using energy efficiently
- Software programs and installation methods
- Commissioning procedures
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently install and commission CNC software in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and

EVIDENCE GUIDE

- codes of practice relevant to installing and commissioning CNC software
- following organisational policies and procedures relevant to installing and commissioning CNC software
 - effective communication and safe working practices
 - installing and commissioning CNC software for CNC equipment within the enterprise
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment

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of other units of competency

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures

Environmental requirements

RANGE STATEMENT

may include:

- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- the process of setting a program to direct a piece of CNC equipment to undertake the sequence of work and output required.

Installing and commissioning CNC software is to include:

commissioning includes:

- checking that the machine is operating safely and in line with its intended purpose and program

Program format

relates to the intended actions of the CNC machine and the time needed to perform those

RANGE STATEMENT

	actions, taking into account the limitations of the machinery and cutters
Software timer	is the software component that schedules which activities occur at what point in the program format
Communication may include:	<ul style="list-style-type: none">• schedules• verbal and non-verbal language• constructive feedback• active listening• questioning to clarify and confirm understanding• use of positive, confident and cooperative language• use of language and concepts appropriate to individual social and cultural differences• control of tone of voice and body language
External loading devices	are computers (desktop, notebook or laptop) with disk drives able to be linked to the machine control system
Machine control system	is the computerised operating controls for the CNC machine which stores and runs the program at the direction of an operator
Output	is the product intended for production, produced to the intended outcome following the program format in the intended time
External inputs	involve feeding the program from the attached computer to the machine control system which is checked for accuracy with the program master
Program master copy:	<ul style="list-style-type: none">• is the final approved operating program which will be used to reset the CNC machine after maintenance or recalibration of components• is stored in a safe location away from the CNC machine
Records and reports may include:	<ul style="list-style-type: none">• planning and monitoring outcomes• operating logs• performance records• material movement• quality outcomes• hazards

RANGE STATEMENT

- incidents or equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM4204B Sample and test products to specifications

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to take product samples, select and apply authorised testing procedures, interpret test results and report findings on manufactured products, components, assemblies, raw materials, timber, metal alloys, glass, adhesives, fillers and finishes and any other entities produced by the organisation, to ascertain cause of a problem or to improve techniques

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM4204A Sample and test products to specifications

Application of the Unit

Application of the unit

This unit involves sampling and testing products to specifications in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------|--|
| 1. Prepare for testing | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to sampling and testing products to specifications are identified and followed</p> <p>1.2. <i>Product quality specifications</i> are read, drawings interpreted and test parameters selected</p> <p>1.3. Type and quantity of entities for <i>testing</i> are obtained and design features that impact on testing and inspection are noted</p> <p>1.4. <i>Equipment</i> is selected and <i>calibrated</i> appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Testing process is selected and planned in line with</p> |
|------------------------|--|

ELEMENT	PERFORMANCE CRITERIA
	site procedures
	1.6. Communication with others is established and maintained in line with OHS requirements
2. Test samples	2.1. Conforming or non-conforming products , materials or waste are selected for testing in line with organisational requirements
	2.2. Observations of operators and copies of procedures are collected
	2.3. Problems or improvement requirements are interpreted and analysed
	2.4. Samples are prepared and manufacturing dates, times and batches identified from production records
	2.5. Test data is established, reviewed and interpreted in line with site procedures
	2.6. Test is conducted in line with industry standards and environmental protection requirements
	2.7. Comparisons of all data collected are made and the results checked by further sampling and testing
3. Evaluate and report test outcomes	3.1. Results of tests are evaluated for implication and impact on production process
	3.2. Action is taken to rectify or improve upon the test results achieved
	3.3. Recommendations are noted and considered for feasibility
	3.4. Test results are communicated to production personnel to facilitate process control or changes
	3.5. Testing process and equipment faults are recorded and reported to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, safely sample and test products to specifications
- Communication skills and interpersonal techniques sufficient to interact

REQUIRED SKILLS AND KNOWLEDGE

appropriately with colleagues and others in the workplace

- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time and resources required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for sampling and testing products to specifications
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures relevant to sampling and testing products to specifications
- Environmental risks and hazards
- Using energy effectively and efficiently
- Sampling and testing techniques
- Characteristics of raw materials and other entities
- Testing conditions and facilities
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently sample and test products to specifications within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to sampling and testing products to specifications
- following organisational policies and procedures relevant to sampling and testing products to specifications
- effective communication and safe working practices
- sampling and testing products to specifications in line with prescribed organisational requirements
- undertaking testing procedures for given entities
- reporting on testing outcomes

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks,

EVIDENCE GUIDE

with questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements

RANGE STATEMENT

- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Product quality specifications** are to include:
- the guidelines set down by the organisation for the development or production of products or materials, which specify the intended outcomes and quality expectations to set tolerances
- Testing** is to include:
- the most appropriate approach taken to ascertain the cause of a problem or to improve a current methodology
- Equipment** may include:
- a range of:
- testing equipment
 - tools
 - gauges
- Calibration** is the setting of testing equipment to follow the convention, which in turn checks their accuracy and ensures accurate test results
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Products** may include:
- any manufactured product, material or associated product used by the organisation
- Sampling** is the process of selecting random products or materials from the production line in preparation for testing
- Recording and reporting** may include:
- testing results
 - quantities produced
 - condition changes
 - production difficulties
 - storage locations
 - quality outcomes
 - hazards

RANGE STATEMENT

- incidents or equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM4205A Prepare and advise on a broad range of timber roof truss details using computers

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and advise on a broad range of timber roof truss drawings, production documents and installation instructions using custom software

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves the preparation of a broad range of timber roof truss drawings, production documents and installation instructions using computers in a timber production or design setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Interpret plans or designs and create layouts | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to preparing and advising on timber <i>roof truss</i> details are identified and followed
1.2. <i>Design inputs</i> are identified and verified
1.3. <i>Computer software</i> is checked for currency and used to prepare roof truss layouts and production documentation
1.4. Design requirements outside software limitations are resolved |
| 2. Review and test design options | 2.1. Roof truss layouts are reviewed and tested for optimal suitability for stakeholders
2.2. <i>Effective processes</i> are used to optimise roof truss layout and ensure <i>stakeholder</i> objectives are met |
| 3. Provide advice on design, production and installation issues | 3.1. <i>Production and installation advice</i> is prepared and documented
3.2. Documented advice is maintained and communicated to all stakeholders, prior to and following installation, as required by organisational procedures |

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------------|--|
| 4. Manage roof truss outputs | 4.1. Roof truss design layouts are certified in line with legislative or organisational requirements |
| | 4.2. <i>Drawings and documentation</i> are maintained, communicated and stored, in line with <i>identified standards</i> |

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to accurately prepare roof truss drawings, production documents and installation instructions and test designs and specifications using custom software
- Communication skills sufficient to discuss and provide production and installation advice to a range of stakeholders
- Literacy skills sufficient to interpret design requirements, research evaluate and communicate design concepts, interpret workplace documents and technical information, prepare accurate and detailed advice and instructions to a range of stakeholders
- Numeracy skills sufficient to evaluate areas, volumes, loads, pressures, mass and grades, analyse qualitative and quantitative information and data
- Problem solving skills sufficient to identify problems and appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for preparing and advising on a broad range of timber roof truss drawings, production documents and installation instructions using custom software
- Organisational and site standards, requirements, policies and procedures relevant to interpreting plans and designs to prepare a broad range of timber roof truss details
- Environmental protection requirements, including the safe disposal of waste material
- Limits of ability and authority with respect to non-conforming design
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding

REQUIRED SKILLS AND KNOWLEDGE

techniques

- Types of tools and equipment relevant to preparing and advising on timber roof truss details, and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can prepare and advise on a broad range of timber roof truss details using computers

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to preparing and advising on a broad range of timber roof truss details using computers
- following organisational policies and procedures relevant to preparing and advising on a broad range of timber roof truss details using computers
- preparation and advice on a broad range of timber roof truss details using computers
- preparation of roof truss layouts and production documentation for each roof truss type identified in the range statement
- preparation of roof truss layouts and production documentation where interaction between roof truss types is required
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Context of and specific resources for assessment

EVIDENCE GUIDE

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- ergonomic office layouts and practice
- elimination of hazardous materials and substances
- management of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- Building Code of Australia
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal

Organisational requirements may include:

- organisational and site guidelines
- policies and procedures relating to own role and responsibility

RANGE STATEMENT

- quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Roof trusses** must include:
- "A" type truss
 - truncated standard
 - raking truss
 - girder truss
 - truncated girder
 - jack girder
 - rafter truss
 - gable truss
 - saddle truss
 - bowstring truss
 - vaulted truss
 - truncated saddle
- Design inputs** may include:
- identified standards
 - pitching lines and load bearing points
- and may include design factors such as:
- roof material loads
 - wind zone and applied loads
 - commercial or residential output
 - additional roof loading
 - post disaster structures
 - roof shape
 - roof lines
- and may include available materials, such as:
- dimensioned timber
 - graded timber
 - treated or untreated timber
 - nail plate and other hardware dimensions
- Computer software** must
- proprietary software capable of developing a

RANGE STATEMENT

include: planning outcome to an identified standard

Effective processes may include:

- documented use of iterative process
- documented use of organisational process
- documented reference to identified standards

Stakeholders may include:

- clients
- builders
- manager
- supervisor
- production staff
- engineers
- architects and designers
- building certifiers
- software providers

Production and installation advice may include:

- installation instructions to stakeholders, including roof truss layouts
- certification to stakeholders

Drawings and documentation may include:

- drawing views
- drawing notes
- records of conversation
- records of amendments
- functional and pictorial images
- design records
- component cutting details

Identified standards may include:

- Building Codes of Australia
- Australian Standards
- organisational quality standards

Unit Sector(s)

Not Applicable

Competency field

Competency field Timber Manufactured Products

FPITMM4206A Prepare and advise on a broad range of timber floor system details using computers

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and advise on a broad range of timber floor system drawings, production documents and installation instructions using custom software

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves the preparation of a broad range of timber floor system drawings, production documents and installation instructions using computers in a timber production or design setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Interpret plans or designs and create layouts | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to preparing and advising on a broad range of timber <i>floor system</i> details using computers are identified and followed
1.2. <i>Design inputs</i> are identified and verified
1.3. <i>Computer software</i> is checked for currency and used to prepare floor system layouts and production documentation
1.4. Design requirements outside software limitations are resolved |
| 2. Review and test design options | 2.1. Floor system layouts are tested for optimal suitability for stakeholders
2.2. <i>Effective processes</i> are used to optimise floor system layout and ensure <i>stakeholder</i> objectives are met |
| 3. Provide advice on design, production and installation issues | 3.1. <i>Production and installation advice</i> is prepared and documented
3.2. Documented advice is maintained and communicated to all stakeholders, prior to and following installation, as required by organisational |

ELEMENT

PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
	procedures
4. Manage floor system outputs	4.1. Floor system design layouts are certified in line with legislative or organisational requirements 4.2. <i>Drawings and documentation</i> are maintained, communicated and stored in line with <i>identified standards</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to accurately prepare timber floor system drawings, production documents and installation instructions and test designs and specifications using custom software
- Communication skills sufficient to discuss and provide production and installation advice to a range of stakeholders
- Literacy skills sufficient to interpret design requirements, research evaluate and communicate design concepts, interpret workplace documents and technical information, prepare accurate and detailed advice and instruction to a range of stakeholders
- Numeracy skills sufficient to evaluate areas, volumes, loads, pressures, mass and grades, efficiently analyse qualitative and quantitative information and data
- Problem solving skills sufficient to identify problems and appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for preparing and advising on a broad range of timber floor system drawings, production documents and installation instructions using custom software
- Organisational and site standards, requirements, policies and procedures for interpreting plans and designs to prepare a broad range of timber floor system drawings and production documents using computers
- Environmental protection requirements, including the safe disposal of waste material
- Limits of ability and authority with respect to non-conforming design

REQUIRED SKILLS AND KNOWLEDGE

- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment for preparing and advising on timber floor system details using computers and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can prepare and advise on a broad range of timber floor system details using computers

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to preparing and advising on a broad range of timber floor system details using computers
- following organisational policies and procedures relevant to preparing and advising on a broad range of timber floor system details using computers
- preparing and advising on a broad range of timber floor system details using computers
- preparation of floor system layouts and production documentation for each floor system type identified in the range statement
- preparation of floor system layouts and production documentation where composites floor system layouts are required

Context of and specific resources

- Competency is to be assessed in the workplace or

EVIDENCE GUIDE

for assessment

realistically simulated workplace

- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task

EVIDENCE GUIDE

should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- ergonomic office layouts and practice
- elimination of hazardous materials and substances
- management of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- Building Code of Australia
- confidentiality and privacy
- OHS

RANGE STATEMENT

- the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Floor systems** must include:
- webbed truss
 - I-beams
 - solid timber sections
 - laminated beams
 - composite systems
- Design inputs** may include:
- identified standards
- and may include available materials, such as:
- timber dimensions, grades and treatments
 - nail plate and other hardware dimensions
- and may include applied loads, such as:
- floor material
 - wind zone
 - commercial or residential output
 - additional floor loads
 - post disaster structures
- Computer software** must include:
- proprietary software capable of developing a planning outcome to an identified standard
- Effective processes** may
- documented use of organisational process
 - documented reference to identified standards

RANGE STATEMENT

include:

Stakeholders may include:

- clients
- builders
- manager
- supervisor
- production staff
- engineers
- architects and designers
- building certifiers
- software providers

Production and installation advice may include:

- installation instructions to stakeholders, including floor system layouts
- certification to stakeholders
- documented advice to production
- feedback to installers

Drawings and documentation may include:

- drawing views
- drawing notes
- records of conversation
- records of amendments
- functional and pictorial images
- design records
- component cutting details

Identified standards may include:

- Building Code of Australia
- Australian Standards
- organisational quality standards

Unit Sector(s)

Not Applicable

Competency field

Competency field

Timber Manufactured Products

FPITMM4207A Prepare and advise on a broad range of timber wall frame details using computers

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and advise on a broad range of timber wall frame drawings, production documents and installation instructions using custom software

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit

The unit involves the preparation of a broad range of wall frame drawings, production documents and installation instructions using computers in a timber production or design setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Interpret plans or designs and create layouts | 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to preparing and advising on a broad range of <i>wall frame</i> details using computers are identified and followed |
| | 1.2. Applied loads and other <i>design inputs</i> are identified and verified |
| | 1.3. <i>Computer software</i> is checked for currency and used to prepare wall frame layout and production documentation |
| | 1.4. Design requirements outside software limitations are resolved |
| 2. Review and test design options | 2.1. Wall frame layouts are tested for optimal suitability for stakeholders |
| | 2.2. <i>Effective processes</i> are used to optimise wall frame layouts and ensure <i>stakeholder</i> objectives are met |
| 3. Provide advice on design, production and installation issues | 3.1. <i>Production and installation advice</i> is prepared and documented |
| | 3.2. Documented advice is maintained and communicated to all stakeholders, prior to and |

ELEMENT

PERFORMANCE CRITERIA

- following installation, as required by organisational procedures
4. Manage wall frame outputs
- 4.1. Wall frame design layouts are certified in line with legislative or organisational requirements
- 4.2. *Drawings and documentation* are maintained, communicated and stored, in line with *identified standards*

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to accurately prepare wall frame drawings, production documents and installation instructions and test designs and specifications using custom software
- Communication skills sufficient to interact with and provide production and installation advice to a range of stakeholders
- Literacy skills sufficient to interpret design requirements, research evaluate and communicate design concepts, interpret workplace documents and technical information, prepare accurate and detailed advice and instruction to a range of stakeholders
- Numeracy skills sufficient to evaluate areas, volumes, loads, pressures, mass and grades, analyse qualitative and quantitative information and data
- Problem solving skills sufficient to identify problems and appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for preparing and advising on a broad range of wall frame drawings, production documents and installation instructions using custom software
- Organisational and site standards, requirements, policies and procedures relevant to interpreting plans and designs to prepare a broad range of timber wall frame drawings and production documents using computers
- Environmental protection requirements, including the safe disposal of waste material
- Limits of ability and authority with respect to non-conforming design

REQUIRED SKILLS AND KNOWLEDGE

- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment for preparing and advising on timber wall frames using computers and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can prepare and advise on a broad range of timber wall frame details using computers

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to preparing and advising on a broad range of timber wall frame details using computers
- following organisational policies and procedures relevant to preparing and advising on a broad range of timber wall frame details using computers
- the ability to prepare and advise on a broad range of timber wall frame details using computers
- preparation of wall frame layouts and production documentation for each wall frame type identified in the range statement
- preparation of wall frame layouts and production documentation where interaction between wall frame types is required
- Competency is to be assessed in the workplace or realistically simulated workplace

Context of and specific

EVIDENCE GUIDE

resources for assessment

- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- ergonomic office layouts and practice
- elimination of hazardous materials and substances
- management of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- Building Code of Australia
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice

RANGE STATEMENT

Organisational requirements may include:

- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

Wall frame systems must include:

- standard wall frame
- raking wall frame
- fire rated wall frame

Design inputs may include:

- wall heights
- lintel requirements
- claddings
- framing codes
- door and window locations
- fire rating

and may include applied loads, such as:

- roof loads
- wind zone
- commercial or residential output
- additional floor loading
- post disaster structures

and may include available materials, such as:

- dimensioned timber
- graded timber
- treated or untreated timber
- nail plate and other hardware dimensions
- proprietary software capable of developing a planning outcome to an identified standard

Computer software must include:

RANGE STATEMENT

Effective process may include:

- documented use of organisational process
- documented reference to identified standards

Stakeholders may include:

- clients
- builders
- manager
- supervisor
- production staff
- engineers
- architects and designers
- building certifiers
- software providers

Production and installation advice may include:

- installation instructions to stakeholders, including wall frame layouts

certification

- documented advice to production
- feedback to installers

Drawings and documentation may include:

- drawing views
- drawing notes
- records of conversation
- records of amendments
- functional and pictorial images
- design records
- component cutting details

Identified standards may include:

- Building Code of Australia
- Australian Standards
- multi-residential framing code
- organisational quality standards

Unit Sector(s)

Not Applicable

Competency field

Competency field Timber Manufactured Products

FPITMM5201B Assess product feasibility of designs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to systematically analyse, assess and determine the feasibility of designs for translation into commercially viable production

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM5201A Assess product feasibility of designs

Application of the Unit

Application of the unit This unit involves assessing product feasibility of designs in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse design objectives	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to assessing product feasibility of designs are identified and followed</p> <p>1.2. <i>Design purpose</i> is assessed and the potential market for the product investigated</p> <p>1.3. Intended production <i>materials</i> and production processes are <i>analysed</i> as the basis for development</p> <p>1.4. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set the design assessment criteria	<p>2.1. <i>Criteria</i> for the assessment of production material options are established</p> <p>2.2. Criteria for the assessment of product <i>functionality</i> are established</p> <p>2.3. Criteria for the assessment of production process options are established and impact of these on overall business operations assessed</p> <p>2.4. Criteria for the assessment of safety and potential <i>liability</i> issues are established</p> <p>2.5. Criteria for assessment of costs and <i>marketability</i></p>

ELEMENT	PERFORMANCE CRITERIA
3. Apply the assessment criteria	<p>are established</p> <p>3.1. Resources including human, material, equipment and systems are allocated to particular design grading criteria processes</p> <p>3.2. Products which are competitors or potential competitors in the market place are selected for comparative purposes</p> <p>3.3. Design is scored and graded against agreed criteria and results recorded</p> <p>3.4. Competition products are scored and graded against agreed criteria and results recorded</p> <p>3.5. Assessment results are completed in line with the agreed process</p>
4. Establish feasibility and options	<p>4.1. Assessment results of the design and competition products are analysed</p> <p>4.2. Designs which fail to satisfy assessment and provide no optional potential are rejected</p> <p>4.3. Designs which fail to satisfy assessment and have optional or alternative potential are referred to appropriate personnel</p> <p>4.4. Designs which satisfy potential are conditionally endorsed and conditions recorded and passed to the appropriate personnel</p> <p>4.5. Formal records and reports are completed and processed in line with organisational procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment safely assess product feasibility of designs
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to

REQUIRED SKILLS AND KNOWLEDGE

complete a task

- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assessing product feasibility of designs
- Environmental protection requirements, including the safe disposal of waste material and minimising carbon emissions
- Organisational and site standards, requirements, policies and procedures relevant to the assessment of product feasibility of designs
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Problem identification and resolution
- Product design methods and trends
- Characteristics of materials and equipment
- Products and their use
- Criteria for assessing designs
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess product feasibility of designs within

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>organisational requirements</p> <p>The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to assessing product feasibility of designs • following organisational policies and procedures relevant to assessing product feasibility of designs • effective communication and safe working practices • assessing product feasibility of designs in line with organisational requirements and performance targets
Context of and specific resources for assessment	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills • Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge • Assessment may be applied under project-related

EVIDENCE GUIDE

conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and

RANGE STATEMENT

substances

- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements
may include:

- legal, organisational and site guidelines
- policies and procedures relating to own role and responsibility

RANGE STATEMENT

- quality assurance
- procedural manuals, quality and continuous improvement processes and standards
- OHS, emergency and evacuation
- ethical standards
- recording and reporting
- access and equity principles and practices
- equipment use
- maintenance and storage
- environmental management (waste disposal, recycling and re-use guidelines)

Design purpose is to include:

the process of applying:

- problem solving skills
- thought processes
- cultural and demographic awareness
- materials technology
- conceptual development techniques
- working with production limitations to determine and produce products or 3-D functional solutions

Materials may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board products
- coated and/or treated timber products
- beams or laminated beams

Analysis of production processes is to include:

- consideration of the impact on the environment
- use of renewable energy
- effective and efficient use of energy
- effective and efficient use of material

Communication may include:

- verbal and non-verbal language
- constructive feedback

RANGE STATEMENT

- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Criteria are a proforma for establishing the viability of any aspect of the design process and scoring that on a points system against set questions

Functionality is the process of assessing a design for its ease of use and application together with its relevance for the desired purpose

Liability is to include: assessing a design to ensure:

- it will not cause danger to someone or something resulting in litigation against the enterprise
- its impact on the environment is minimised or off-set (where feasible)

Marketability is the process of assessing the potential for sale of the product

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents or equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication

RANGE STATEMENT

system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM5202B Develop, trial and evaluate prototypes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to develop specifications, specify and select materials and processes, produce and trial prototypes and complete evaluation documentation

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM5202A Develop, trial and evaluate prototypes

Application of the Unit

Application of the unit This unit involves developing, trialling and evaluating prototypes in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop prototype specifications	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to developing, trialling and evaluating prototypes are identified and followed</p> <p>1.2. <i>Prototype</i> purpose and outline requirements are specified from design concepts or customer requirements</p> <p>1.3. <i>Materials</i> are specified following a detailed analysis of the options</p> <p>1.4. Detailed prototype <i>design</i> specifications are prepared and documented</p> <p>1.5. Construction requirements and methods are specified appropriate for the materials to be used</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Plan and prepare prototype for construction	<p>2.1. <i>Work order</i> and <i>work plans</i> are produced and checked with <i>appropriate personnel</i></p> <p>2.2. Type and quantity of material and <i>consumables</i> to be constructed are collected</p> <p>2.3. <i>Equipment</i> is selected appropriate to work</p>

ELEMENT**PERFORMANCE CRITERIA**

- requirements and checked for operational effectiveness in line with manufacturer's recommendations
- 2.4. *Stages* of the construction process are planned, documented and quality checked
- 2.5. Appropriate *jigs* and other construction aids are obtained and adjusted to suit the work
3. Produce the prototype
- 3.1. Work plan is followed to construct the item
- 3.2. Checks are conducted at designated points in construction
- 3.3. *Modifications* to designs and plans are detected and recommended within workplace procedures
- 3.4. Modifications to the plan are documented and followed
- 3.5. Prototype is checked for effectiveness and timeliness of construction to suit the purpose
- 3.6. Prototype development processes and problems are *recorded and reported*
4. Trial and evaluate the prototype
- 4.1. *Trial* objectives and processes are developed, specified and documented
- 4.2. Personnel involved in the trial and evaluation are informed of their responsibilities and functions
- 4.3. Trial equipment, tools and materials are prepared and certified prior to use
- 4.4. Prototype trials are conducted and results captured and recorded in line with the trial specification
- 4.5. Results of trials are evaluated and evaluation records and recommendations are processed in line with enterprise procedures
- 4.6. Sample prototypes are *disposed of* in line with site procedures and environmental requirements
- 4.7. Prototypes no longer required are stored or disposed of in line with site procedures and environmental requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, safely develop, trial and evaluate prototypes
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for developing, trialling and evaluating prototypes
- Environmental protection requirements, including the safe disposal of waste material and minimising carbon emissions
- Organisational and site standards, requirements, policies and procedures relevant to developing, trialling and evaluating prototypes
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Prototype development and purposes, prototype trialling and evaluation processes
- Characteristics of timber and timber defects
- Construction sequences and jigs
- Industry standard cross-sections and lengths
- Construction componentry and standards
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely develop, trial and evaluate prototypes within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to developing, trialling and evaluating prototypes
- following organisational policies and procedures relevant to developing, trialling and evaluating prototypes
- effective communication and safe working practices
- developing, trialling and evaluating prototypes in line with construction plans, drawings and specifications to follow construction standards
- trialling and evaluating prototype outcomes within acceptable development times, enterprise production procedures and product purpose

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Prototypes may include:

- new designs for:
 - pallets
 - crates
 - trellises
 - trusses
 - stairs
 - doors
 - windows
 - frames, beams
- new product development

Material may include:

- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- stress and non-stress graded timber
- preservative treated timber
- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard and other manufactured board products
- coated and/or treated timber products
- beams or laminated beams

Design is to include:

- the process of applying:
 - problem solving skills
 - thought processes
 - cultural and demographic awareness
 - materials technology
 - conceptual development techniques
- working with production limitations to

RANGE STATEMENT

determine and produce products or 3-D functional solutions

- awareness of potential environmental issues and processes to accommodate these issues
- using energy and materials efficiently
- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language
- instructions for the construction and testing of new timber products from the work site

Communication may include:

Work order is to include:

and may include:

- construction plans or drawings
- type of product
- size
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Work plan is to include:

- the development sequence
- use of material
- labour requirements

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Consumables are to include:

- nailing plates

and may include:

- gang nails
- nail gun nails
- staples

RANGE STATEMENT

- Equipment** may include:
- finishing products
 - adhesives
 - measuring equipment
 - assembly jigs
 - nail plate presses
 - staple guns
 - nail guns
 - compressor or compressed air supply
 - marking equipment
 - strapping equipment
- Stages** are to include:
- development phases of the new prototype
 - review for each process and modification
- Jigs** may include:
- enterprise manufactured templates which assist in the positioning of components during the assembly process
 - newly developed jigs as part of the prototype development process
- Modifications** may include: changing aspects of the prototype plans, drawings and specifications to:
- facilitate acceptable construction methods
 - facilitate standard component sizes
 - rectify and overcome a construction fault
 - respond to environmental issues
- Records and reports** may include:
- product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents or equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system
- Trial** is to include: the process of testing the prototype for:
- strength
 - durability

RANGE STATEMENT

- operational effectiveness
 - impact of the production process on the environment
- Disposing of** may include:
- recycling sample prototypes or prototypes no longer required
 - re-using sample prototypes or prototypes no longer required

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM5203B Generate and transfer complex computer-aided drawings and specifications

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare complex drawings using computer-aided techniques and capabilities including three dimensional (3-D) modelling, exploded assembly drawings and conversion of drawings for computer numerically controlled (CNC) applications

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM5203A Generate and transfer complex computer-aided drawings and specifications

Application of the Unit

Application of the unit

This unit involves generating and transferring complex computer-aided drawings and specifications in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for drawing

- 1.1. Applicable ***Occupational Health and Safety (OHS), environmental, legislative and organisational requirements*** relevant to generating and transferring complex computer-aided drawings and specifications are identified and followed
- 1.2. Type of ***drawings*** to be created with ***computer-aided design (CAD) systems*** is identified and checked with ***appropriate personnel***
- 1.3. ***Equipment*** is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations
- 1.4. CAD process is planned in line with site procedures
- 1.5. ***Communication*** with others is established and

ELEMENT

PERFORMANCE CRITERIA

- maintained in line with OHS requirements
2. Create exploded assembly drawings
- 2.1. **Drawing preparations** are obtained and completed
 - 2.2. **3-D models** are prepared for all components
 - 2.3. **Perspective view** of the model is created in line with drawing specifications
 - 2.4. Model is **exploded** so that all components are visible
 - 2.5. All individual components are labelled in line with organisational requirements
 - 2.6. Quality checks are completed to ensure accuracy of outcomes
 - 2.7. Drawings are stored in line with organisational requirements
3. Create job sheets
- 3.1. **Job sheet preparations** are selected and completed
 - 3.2. Job sheet template is set up in line with organisational requirements and practices
 - 3.3. **Orthographic views** are created and dimensioned
 - 3.4. Sequencing of machine operations and operator requirements are specified and listed
 - 3.5. Draft job sheets are prepared, reviewed, tested and amended to organisational requirements
 - 3.6. Job sheets are stored in line with organisational requirements
4. Convert drawings for CNC applications
- 4.1. **Conversion** requirements are identified and checked from the **CNC machine** specifications
 - 4.2. **Layers** are created and additional information required for final conversion obtained
 - 4.3. **Drawing entities** are assigned to the relevant layers
 - 4.4. Conversion to the required file type is completed
 - 4.5. Converted file is stored in line with organisational requirements
 - 4.6. Generation process and equipment faults are **recorded and reported**

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, safely generate and transfer complex drawings using CAD systems
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for generating and transferring complex computer-aided drawings
- Environmental protection requirements, including the safe disposal of waste material and minimising carbon emissions
- Organisational and site standards, requirements, policies and procedures relevant to generating and transferring complex computer-aided drawings
- Environmental risks and hazards
- Characteristics of timber, timber products and defects
- Set up of CAD programs
- CNC machines and building products
- Drawing techniques and principles
- Standard material sizes
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely generate and transfer complex computer-aided drawings and specifications in line with site standards and organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to generating and transferring complex computer-aided drawings
- following organisational policies and procedures relevant to generating and transferring complex computer-aided drawings
- effective communication and safe working practices
- generating and transferring complex drawings using CAD systems in line with site requirements
- the conversion of complex drawings for use in CNC machine operating centres

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package

EVIDENCE GUIDE

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Drawings** may include:
- perspective
 - orthographic and exploded views
 - plans
 - diagrams
 - charts
 - elevations
- CAD systems** are comprised of proprietary software programs
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** is to include:
- computers
 - CAD software programs
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Drawing preparations** may include:
- drawing name
 - labelling information
 - dimensions
 - specifications
 - information management requirements
- 3-D models** may include:
- scale model components
 - 3-D computer images of componentry
- Perspective view** is to include:
- one, two and three point perspective drawings

RANGE STATEMENT

- Exploded** is when all of the parts of a drawing are separated into their assembly components
- Job sheet preparations** may include:
- file storage
 - product coding
 - inventory information
 - drawing management requirements
- Orthographic views** are to include:
- standard views (front, side, top, and so on) of a given object
- Conversion** is to include:
- the process of transferring computer generated drawing views to CNC machine operating centres for translation to program formats
- CNC machines** may include:
- CNC sizing machines
 - CNC machining and processing centres
- Layers** are the analogous step-by-step added views of an exploded drawing - much like transparent layers placed over the top of one another
- Drawing entities** are to include:
- any single item created on the screen including but not limited to:
 - lines
 - arcs
 - circles
 - text
 - hatch
 - dimensions
- Records and reports** may include:
- the specified drawings
 - product type
 - sizes
 - quality outcomes
 - and may be:
 - manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM5204B Manage product design

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to clarify and confirm design objectives and goals, and to resource and manage the design cycle of actions to the point where the outcomes are ready for acceptance for production purposes

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM5204A Manage product design

Application of the Unit

Application of the unit The unit involves managing product design in a forest products factory environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Establish design objectives and success factors

- 1.1. Applicable *Occupational Health and Safety* (OHS), *environmental, legislative* and *organisational requirements* relevant to managing product design are identified and followed
- 1.2. Information on *design tasks* is collected, analysed and maintained
- 1.3 Design workload is packaged into discrete, manageable *design work units*
- 1.4 Criteria for each design work unit are specified and *key success factors* and indicators are established
- 1.5 *Communication* with others is established and maintained in accordance with OHS requirements

2. Plan the design activity

- 2.1. Scope of each design work unit is reviewed and personnel and material resource requirements specified
- 2.2. Design work units are programmed and scheduled in line with target achievement dates and resource constraints
- 2.3. Design work plan, including key success or

ELEMENT	PERFORMANCE CRITERIA
	performance indicators, is processed and approved in line with enterprise procedures
3. Implement the design work plan	<p>3.1. Resources including human, material, equipment and systems are allocated to particular design work units and tasks</p> <p>3.2. Designers are directed and involved in finalising work preparations and processes, and in establishing key performance indicators</p> <p>3.3. Coordination issues with <i>supporting agencies</i> and departments are resolved</p> <p>3.4. Removal of <i>inhibitors</i> to achievements are met</p> <p>3.5. Progress reviews are carried out and support provided to the designers to maintain technical design standards and achievement targets</p> <p>3.6. Design outcomes are prepared, finalised and certified as meeting the required specifications</p> <p>3.7. Design outcomes are documented and processed for the client's acceptance</p> <p>3.1.3.8. Design process and problems are <i>recorded and reported</i> to <i>appropriate personnel</i></p>
4. Monitor and respond to design performance	<p>4.1. <i>Performance targets</i> are monitored to assess progress and to provide indicators as to target revision or other intervention response</p> <p>4.2. Unsatisfactory performance is detected and prompt action is taken to rectify the situation</p> <p>4.3. Mentoring and coaching is provided to support individuals or teams through the design process</p> <p>4.4. Recommendations for variations to plans are negotiated and approved by the appropriate personnel</p> <p>4.5. Systems, procedures and records associated with documenting performance are managed in accordance with the enterprise requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and safely manage product design
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for product design management
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for product design management
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Established communication channels and protocols
- Product design methods
- Characteristics of materials and equipment
- Construction sequences and jigs
- Construction componentry and construction standards
- Industry standard cross-sections and lengths
- Procedures for the recording, reporting and maintenance of workplace records and information
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely manage product design

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to managing product design
- following organisational policies and procedures relevant to managing product design
- effective communication and safe working practices
- managing product design in line with design criteria and performance targets

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and

RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- Design tasks** are to include:
- ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - the process of applying problem solving skills
 - thought processes
 - cultural and demographic awareness
 - materials technology
 - conceptual development techniques
 - working with production limitations to determine and produce products or 3-D functional solutions

Design work units

break up tasks into manageable parts for design teams or individuals who may work on separate parts of a design project

Key success factors may include:

- achieving goals in the time allocated
- meeting specified design criteria
- minimising the impact of production on the environmental
- using energy efficiently and effectively
- using material efficiently and effectively

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Supporting agencies may include: organisations providing:

- services
- graphic work
- componentry

Inhibitors may include:

barriers to design outcomes such as:

RANGE STATEMENT

- Records and reports** may include:
- standard timber sizes
 - equipment usage capabilities and skill capabilities
 - product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents or equipment malfunctions and
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Performance targets** are to include:
- completion of design tasks inside designated timeframes
 - design outcomes in line with the established criteria

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Co-requisite units

Competency field

Competency field

Timber Manufactured Products and Timber Merchandising

FPITMM5205B Optimise CNC operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to analyse production orders, production histories and machine capabilities and to manipulate machine control programs to optimise production performance for computer numerically controlled (CNC) sizing machines, and CNC machining and processing centres

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM5205A Optimise CNC operations

Application of the Unit

Application of the unit

The unit involves optimising software for computer numerical controlled machines in a forest products factory environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Establish optimal operating conditions

- 1.1. Applicable ***Occupational Health and Safety*** (OHS), ***environmental, legislative*** and ***organisational requirements*** relevant to optimising software for CNC machines are identified and followed
- 1.2. ***Production potential*** of system components are assessed
- 1.3. ***Production orders*** and plans are analysed to identify sustained production requirements
- 1.4. ***Integration options*** are identified and analysed to establish the optimal integration model
- 1.5. ***Software*** and programming requirements to attain and sustain optimal integration are assessed and recorded
- 1.6. ***Communication*** with others is established and

ELEMENT	PERFORMANCE CRITERIA
2. Prepare for software installation	<p data-bbox="628 297 1166 333">maintained in line with OHS requirements</p> <p data-bbox="584 344 1233 454">2.1. Program format and operational purpose are accurately diagnosed and specified applications identified</p> <p data-bbox="584 465 1265 535">2.2. Specifications are checked for intended operating conditions</p> <p data-bbox="584 546 1299 616">2.3. Program instructions are checked to make sure they follow specifications</p> <p data-bbox="584 627 1238 663">2.4. Software timers are counter set to specification</p>
3. Install and integrate automatic process machine control programs	<p data-bbox="584 680 1283 716">3.1. Appropriate program loading technique is selected</p> <p data-bbox="584 728 1307 797">3.2. External loading devices are correctly connected to automatic process machine control system</p> <p data-bbox="584 808 1193 878">3.3. Machine control system is placed in correct operational mode to accept program loading</p> <p data-bbox="584 889 1283 999">3.4. Program is downloaded in line with manufacturers' recommended procedures and enterprise requirements</p> <p data-bbox="584 1010 1278 1079">3.5. Checks are made during and after downloading to ensure accurate and complete data transfer</p> <p data-bbox="584 1090 1289 1200">3.6. External program loading devices and connections are disconnected from process and machine control system</p> <p data-bbox="584 1211 1251 1240">3.7. Integration protocols and actions are completed</p>
4. Commission automatic process and machine control program	<p data-bbox="584 1258 1259 1328">4.1. Operation of the equipment using the program is monitored for accuracy and safe performance</p> <p data-bbox="584 1339 1259 1408">4.2. Outputs are checked and measured to make sure they follow specifications</p> <p data-bbox="584 1420 1238 1489">4.3. External inputs are checked to make sure they follow specifications</p> <p data-bbox="584 1500 1299 1570">4.4. Total operation is checked to make sure they follow specifications</p> <p data-bbox="584 1581 1201 1650">4.5. Location of program master copy storage is identified</p> <p data-bbox="584 1662 1230 1776">4.6. Installation and commissioning process and equipment faults are recorded and reported to appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, safely optimise CNC operations
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for optimising software for CNC machines
- Environmental protection requirements, including the safe disposal of waste material and minimising carbon emissions
- Organisational and site standards, requirements, policies and procedures relevant to optimising software for CNC machines
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- CNC operations and optimisation
- Software programs and installation methods
- Commissioning procedures
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can optimise software for computer numerical controlled machines

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to optimising software for CNC machines
- following organisational policies and procedures relevant to optimising software for CNC machines
- effective communication and safe working practices
- optimising operations for CNC equipment within the enterprise

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

EVIDENCE GUIDE

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements

RANGE STATEMENT

- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Optimisation of CNC machines is the process of maximising a program to direct a piece of CNC equipment to undertake the sequence of work and maximise output

Production potential is the capacity of CNC equipment to produce output at a faster rate and in a more efficient way based on improving program formats

Production orders may include:

- number of products to be produced
- treatment to be applied (sizing or machining activity)

Integration orders are to include:

- instructions to collate two or more sets of software information established through a common identifier

Software is the programs and other operating systems used by a computer

Communication may include:

- schedules
- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Program format is to include:

- intended actions of the CNC machine
- time it takes for intended CNC actions based on the limitations of the machinery and the cutters

Software timers are the software component that schedules which activities occur at what point in the program format

External loading devices are computers (desktop, notebook or laptop) with disk drives able to be linked to the machine control system

RANGE STATEMENT

Machine control system	is the computerised operating controls for the CNC machine which stores and runs the program at the direction of an operator
Integration protocols are to include:	<ul style="list-style-type: none">• the compatibility of two or more sets of software information being collated to form a new program without corrupting
Output	is the product intended for production, produced to the intended outcome following the program format in the intended time
External inputs	involve feeding the program from the attached computer to the machine control system which is checked for accuracy with the program master
Program master copy	<ul style="list-style-type: none">• is the final approved operating program which will be used to reset the CNC machine after maintenance or recalibration of components• is stored in a safe location away from the CNC machine
Records and reports may include:	<ul style="list-style-type: none">• planning and monitoring outcomes• operating logs• performance records• material movement• quality outcomes• hazards• incidents or equipment malfunctions and may be: <ul style="list-style-type: none">• manual• using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPITMM5206B Plan production

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and document the overall requirements of production for an enterprise

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM5206A Plan production

Application of the Unit

Application of the unit

This unit involves production planning in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish production requirements	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to production planning are identified and followed</p> <p>1.2. <i>Data</i> from the sales and market forecasts are interpreted for inclusion in the production plan</p> <p>1.3. <i>Specifications</i> and supporting data are analysed</p> <p>1.4. Projected requirements regarding product quantity, quality, raw material and performance characteristics are established</p> <p>1.5. Production capacity of <i>machines</i> and personnel is analysed and checked</p> <p>1.6. Resources, including raw material supply requirements for the production line, are assessed</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Prepare production plan	<p>2.1. <i>Production procedures</i> are reviewed for suitability to planned schedule</p> <p>2.2. Information and details to include in the production plan are assembled and checked</p> <p>2.3. <i>Inefficiencies and constraints</i> are evaluated and</p>

ELEMENT	PERFORMANCE CRITERIA
3. Monitor and coordinate variations to plan	<p data-bbox="620 297 1302 360">potential improvements or variations to the plan are actioned</p> <p data-bbox="576 378 1278 448">2.4. <i>Production plan</i> is prepared in line with enterprise procedures</p> <p data-bbox="576 465 1283 573">3.1. Production and <i>output</i> are monitored to record and action process improvements based on construction plans, components and hardware being utilised</p> <p data-bbox="576 591 1294 692">3.2. Production output details are obtained and recorded in line with site procedures and environmental requirements</p> <p data-bbox="576 710 1294 810">3.3. Production plan is monitored to ensure production performance is efficient and effective, and variations are achieved</p> <p data-bbox="576 828 1246 891">3.4. Plans are modified to reflect <i>stock</i>, machine and human resource requirements or variations</p> <p data-bbox="576 909 1294 972">3.5. Implementation of plan variations is coordinated to make sure they follow instructions and specifications</p> <p data-bbox="576 990 1270 1055">3.6. Production planning <i>records</i> are maintained and <i>reports</i> prepared in line with enterprise procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment, safely plan production
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for production planning

- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures relevant to production planning
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Production plans, procedures and scheduling
- Equipment and labour capabilities
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan production in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to production planning

EVIDENCE GUIDE

- following organisational policies and procedures relevant to production planning
 - effective communication and safe working practices
 - production planning for the enterprise
 - modification of production procedures within the enterprise
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Data is to include:

- reports and information on production times
- output
- employment costs
- overtime and overheads
- projected orders
- material costs
- distribution times and costs

Specifications are to include:

- production orders
- work orders

Machines are to include:

- all machinery and equipment available for

RANGE STATEMENT

- production purposes within the enterprise
- Communication** may include:
- schedules
 - verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive
 - confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Production procedures** may include:
- machinery and equipment usage
 - workforce levels
 - construction procedures
 - material supply
 - supplied products to support production, distribution, storage and despatch
- Inefficiencies and constraints** are to include:
- any production procedure which demonstrates:
- slow output
 - quality issues requiring review of the plan and production methods
- Production plan** is to include:
- all production procedures within an efficient and effective system of operation which returns a profit for the enterprise
- Output** is to include:
- type
 - speed
 - finish
 - dimensional consistency
 - quality of completed products
- Stock** is to include:
- out-of-stock and overstock situations
 - management of suppliers to maintain stock levels marginally above production output
- Records and reports** may include:
- planning and monitoring outcomes
 - operating logs
 - production records
 - material movement
 - despatch outcomes
 - storage locations
 - quality outcomes

RANGE STATEMENT

- hazards
- incidents or equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising

FPIWPP2201B Cut panels

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and cut panels to size with a power driven saw. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2201A Cut panels

Application of the Unit

Application of the unit

The unit involves cutting panels in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cutting	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to cutting panels are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be cut is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Material <i>cutting patterns and saw set-up</i> sequences are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Cut material to size or angle	<p>2.1. Material is marked and stops set in preparation for cutting</p> <p>2.2. Cutting sequence and patterns are followed to produce the required quantity</p> <p>2.3. Cuts are checked for length or angle within a set</p>

ELEMENT**PERFORMANCE CRITERIA***tolerance*

- | | |
|---------------------------------|---|
| 3. Conduct operator maintenance | <p>2.4. Material with <i>defects</i>, incorrect cuts and off-cuts are <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.5. Processing and equipment faults are reported to the appropriate personnel</p> <p>2.6. Material is safely <i>stacked</i> in a designated location in line with work order requirements</p> <p>3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>3.2. Saw blades are checked for blunt or damaged condition in line with site procedures</p> <p>3.3. Saw blades are removed and replaced in line with manufacturer's recommendations</p> <p>3.4. Saw area is kept clear of dust, off-cuts and debris in line with OHS requirements</p> |
|---------------------------------|---|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; accurately check cuts for correct length or angle; safely stack material
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task; calculate length and angles including basic addition and subtraction
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for cutting panels

- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for cutting panels
- Characteristics of timber panels and timber panel defects
- Cutting patterns and sequences
- Saw blade condition assessment
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently cut panels to size and angle within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to cutting panels
- following organisational policies and procedures relevant to cutting panels

EVIDENCE GUIDE

Context of and specific resources for assessment

- cutting panels to size and angle in line with the work order and within prescribed organisational tolerances
- conducting operator maintenance on a panel saw with carriage
- stacking batches of cut material in line with organisational requirements and OHS regulations
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the cutting and despatch of timber panel products from the work site

and may include:

- type
- size
- length
- angle
- quantity
- grade
- instructions for the environmental monitoring

RANGE STATEMENT

- Appropriate personnel** may include:
- of work and procedures
 - environmental care requirements relevant to the work
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Material** may include:
- medium density fibreboard
 - laminated veneer
 - chipboard
 - fibreboard
 - plywood
 - continuous ply
 - other manufactured board products
- Storage locations** may include:
- the use of:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** may include:
- measuring equipment
 - power operated
 - manually controlled docking and trimming saws with carriages where the cutting angle is controlled relative to the board guides and

RANGE STATEMENT

clamps

- saws with adjustable angle
- saws with one or multiple blades
- bandsaws
- panel saws
- table saws
- bench saws

and is to include

- procedures for saw lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
 - single straight cuts and angles requiring one cutting pass set for multiple cuts of the same size
- Cutting patterns and saw set-up sequences** are to include:

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Tolerance

is a set limit for cutting over or under the required length within a set margin of acceptance usually + or - 0.5 mm or in line with order or organisational requirements

Defects may include:

- panel warp
- wane
- cupping and veneer or plywood defects including:
 - shakes
 - insect defects
 - knots
 - resin pockets

Disposed of may include:

- recycling timber with defects, incorrect cuts and off-cuts

RANGE STATEMENT

Stacking may include:

- re-using timber with defects, incorrect cuts and off-cuts
 - preparing for transport
- categorising in common size, thickness, length and angle
- marking lots in line with work order and site requirements
 - locating timber so as not to block access or passage

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2202B Surface treat raw board

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to surface treat raw boards with chemical systems using spray boom equipment for the purposes of tempering wood panel products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2202A Surface treat raw board

Application of the Unit

Application of the unit

The unit involves surface treating raw board in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for treating	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to surface treating raw board are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>raw boards</i> to be <i>surface treated</i> is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Material surface treating <i>feed rates</i> and <i>chemical products</i> are selected and planned in line with site procedures and environmental requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line within OHS requirements</p>
2. Surface treat raw boards	<p>2.1. Surface treatment is applied with additive flow rates continually monitored and adjusted in line with site requirements</p>

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|----------------------------------|--|
| 3. Shut down and clean equipment | <p>2.2. <i>Spray operations</i> are continually checked with blockages and filters cleared to maintain spray coverage to specifications</p> <p>2.3. Boards are regularly checked for surface quality and contamination in line with site requirements and corrective action taken</p> <p>2.4. Sub-standard boards are removed from the treatment process and reviewed for further action</p> <p>2.5. Processing and equipment faults are recorded and reported to appropriate personnel</p> <p>2.6. Material is safely dried and stacked in a designated location in line with work order requirements</p> <p>3.1. Shutdown procedures are coordinated with other line operators and followed in line with OHS legislation and site procedures</p> <p>3.2. Pumps are turned off and equipment flushed in line with organisational standard operating procedures</p> <p>3.3. Excess chemicals and flushing liquid are disposed of in line with statutory requirements and environmental regulations</p> <p>3.4. Equipment and chemicals are stored in line with statutory requirements and environmental regulations</p> |
|----------------------------------|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely dry and stack material
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for surface treating raw board
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures related to surface treating raw board
- Characteristics of timber panels
- Chemicals and chemical treatment feed rates
- Spray operations and shut-down procedures
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently surface treat raw boards within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or

EVIDENCE GUIDE

Context of and specific resources for assessment	<p>Territory legislative and regulatory requirements and codes of practice relevant to surface treating raw board</p> <ul style="list-style-type: none"> • following organisational policies and procedures relevant to surface treating raw board • surface treating raw boards in line with the work order and within prescribed organisational requirements • spraying operations and shut-down procedures • stacking of batches of treated material in line with organisational requirements and OHS regulations • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills • Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge • Assessment may be applied under project-related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and

RANGE STATEMENT

- carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the chemical treatment of timber panel products
- and may include:
- type
 - size
 - length

RANGE STATEMENT

- thickness
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Raw boards may include:

- medium density fibreboard
- core for laminated veneer
- chipboard
- fibreboard
- plywood
- other manufactured board products

Surface treatments

are the application of enterprise specific chemical systems to protect wood panel products from infestation, to temper surfaces and ensure faultless bonding of veneers and laminates

Storage locations may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade

RANGE STATEMENT

- shelf life
 - stock rotation position
- Equipment** may include:
- compressor driven spray boom equipment
- Feed rates** are to include:
- the rate of speed the chemicals are passed through the spray equipment affecting the risk of equipment blockage
 - the finish of the material
 - the production output
- Chemical products** see surface treatments
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Spray operations** see equipment and surface treatments
- Contamination** may include:
- dust
 - water spots
 - oil spots from equipment or oily finger prints
- and may cause:
- orange peel effect
 - incomplete cover
 - solvent boil
 - other coverage defects
- Further action** may include:
- re-treating sub-standard boards
 - recycling sub-standard boards
 - re-using sub-standard boards
- Records and reports** may include:
- treatment method
 - product type
 - feed rate
 - inspection
 - grading and labelling outcomes
 - storage locations

RANGE STATEMENT

- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Stacking may include:

- preparing for transport
- categorising in common size, thickness, length, surface treatment
- marking lots in line with work order and site requirements
- locating timber so as not to block access or passage

Shutdown is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source
- cleaning and maintaining all parts
- storage of chemicals

Unit Sector(s)

Unit sector Ne sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2203B Repair veneer and ply

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to assess and fill single thickness veneer, panel products and manufactured plywood to an acceptable level for continued use

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2203A Repair veneer and ply

Application of the Unit

Application of the unit The unit involves repairing veneer and ply in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------|--|
| 1. Prepare for repair | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to repairing veneer and ply are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of material to be repaired is acquired from the veneer or plywood production process</p> <p>1.4. <i>Filler</i> is selected appropriate to work requirements and checked for effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Repair process</i> is selected in line with site procedures</p> <p>1.6. Communication with others is established and maintained in line with OHS requirements</p> |
| 2. Fill material | <p>2.1. Filler is mixed following manufacturer's instructions or pre-mixed filler is obtained in required quantity</p> <p>2.2. <i>Veneer, panel or plywood</i> condition is inspected and marked in readiness for filling</p> <p>2.3. Filler is applied to voids and allowed to dry in</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Redistribute material	<p>readiness for sanding</p> <p>2.4. <i>Mending tape</i> is applied to splits to retain the integrity of the veneer</p> <p>2.5. Repairs are <i>recorded and reported</i> to appropriate personnel</p> <p>3.1. Veneer, panel and plywood are <i>regraded</i> in line with site requirements and industry standards</p> <p>3.2. Material is directed and <i>moved to storage</i> or processing operations in line with site requirements</p> <p>3.3. Sub-standard material is rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>3.4. Work area is cleaned in line with site requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; effectively assess repair requirements; effectively mix filler ingredients; effectively apply mending tape to splits
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes repairing veneer and ply
- Environmental protection requirements, including the safe disposal of waste

REQUIRED SKILLS AND KNOWLEDGE

- material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures relevant to repairing veneer and ply
- Veneer, panel and plywood repair methods
- Methods of visual inspection
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently repair veneer, panel and plywood in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to repairing veneer and ply
- following organisational policies and procedures relevant to repairing veneer and ply
- repairing veneer, panel and plywood in readiness for storage and/or processing
- redistributing material on site using designated

EVIDENCE GUIDE

Context of and specific resources for assessment

equipment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the receipt/despatch and repair of veneer, panel and plywood to/from the designated storage location or processing
- and may include:
- type
 - size
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers

RANGE STATEMENT

Filler may include:

- ready to use pre-mix fillers
- two part fillers
- waxes

Repair process may include:

- assessing material for splits
- voids and splintered or missing edges
- number and frequency of defects
- requirements for grade
- disposition of ply
- selecting the appropriate filler to suit the defective part
- filling the void
- levelling off the filler
- passing it on for sanding

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Veneer, panel and plywood

- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of plywood
- veneer types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn
- panels may include:
 - medium density
 - fibreboard
 - chipboard
 - fibreboard
- plywood is usually three or more layers of veneer with the layers alternating in grain direction to increase strength

Mending tape

is one sided tacking tape used to return veneer to its original position, hiding splits or cracks

RANGE STATEMENT

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

Regrading

is the process of visually inspecting veneer, panel and plywood to re-classify their quality and use after repair has taken effect

Movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size

RANGE STATEMENT

- dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Disposing of** may include:
- recycling sub-standard material
 - re-using sub-standard material

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2204B Repair veneer mechanically

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assess and patch single thickness veneer mechanically to an acceptable level for continued use

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2204A Repair veneer mechanically

Application of the Unit

Application of the unit

The unit involves mechanically repairing veneer in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------|--|
| 1. Prepare for repair | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to mechanically repairing <i>veneer</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of material to be repaired is acquired from the veneer production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Patch strips</i> are selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Patch veneer | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Equipment controls are set and veneer flow coordinated with other operators to ensure minimal downtime</p> |

ELEMENT	PERFORMANCE CRITERIA
	2.3. Patch strips are cut minimising wastage and fed into the machine
	2.4. Veneer sheets are positioned to accept the patch and processed in line with site requirements
	2.5. Out-feed bins or trays are positioned to collect the repaired veneer and are regularly cleared
	2.6. Problems are identified and reported and manual patching applied as required in line with site procedures
3. Redistribute material	3.1. Patched veneer is <i>regraded</i> in line with site requirements and industry standards
	3.2. Material is directed and <i>moved to storage</i> or processing operations in line with site requirements
	3.3. Sub-standard material is rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	3.4. Work area is cleaned in line with site requirements
	3.5. Repair processes are <i>recorded and reported</i> to appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; effectively apply manual patching; effectively select and cut patch strips
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for the mechanical repair of veneer
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures relevant to mechanically repairing veneer
- Mechanical veneer repair methods
- Methods of visual inspection
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently repair veneer mechanically in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to mechanically repairing veneer

EVIDENCE GUIDE

- following organisational policies and procedures relevant to mechanically repairing veneer
 - repairing veneer mechanically in readiness for storage and/or processing
 - redistributing material on site using designated equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage

EVIDENCE GUIDE

the candidate

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Veneer

- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of plywood
- types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn

Work order is to include:

- instructions for the receipt/despatch and repair of veneer to/from the designated storage location or processing

and may include:

- type

RANGE STATEMENT

- size
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** is to include:
- veneer patching machinery, out-feed bins or trays
- and may include:
- lifting equipment
- Patch strips** are:
- replacement pieces of veneer to cover the reverse of deficit areas
 - lined with an adhesive heat reactive backing
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Pre start-up checks** are conducted to ensure:
- machine has been set-up correctly
 - systems are performing accurately
 - machinery is operating to optimum performance
- Regrading** is the process of visually inspecting veneer to re-classify their quality and use after repair has taken effect
- Movement of material** may include:
- the use of:
- conveyor belt systems

RANGE STATEMENT

- track systems
- lifting equipment
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes

RANGE STATEMENT

- hazards
- incidents
- equipment malfunctions

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2205B Prepare chip or fibre blends

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate specialist equipment to produce chip and fibre blends in readiness for the production of panel products, while monitoring and maintaining the flow of operation. The unit includes assessment of chips and set-up of equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2205A Prepare chip or fibre blends

Application of the Unit

Application of the unit

The unit involves preparing chip or fibre blends in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------|---|
| 1. Prepare for mixing | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to preparing chip or fibre blends are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with appropriate personnel</p> <p>1.3. Type and quantity of glue and other ingredients is selected in line with environmental requirements</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Mixing process is planned in line with site procedures</p> <p>1.6. Communication with others is established and maintained in line with OHS requirements</p> |
|-----------------------|---|

ELEMENT	PERFORMANCE CRITERIA
2. Mix ingredients	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Ingredient mixing and <i>feed systems</i> are started and adjusted to produce chip or fibre blend in line with organisational requirements</p> <p>2.3. Blend production is regularly checked to ensure it conforms with organisational and environmental requirements</p> <p>2.4. Additive levels are monitored and replenished in line with mixing process requirements</p> <p>2.5. Samples of mix are regularly taken for testing in line with site requirements</p> <p>2.6. Material chutes are kept free of blockages and system leakages corrected</p> <p>2.7. Processing results and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>
3. Conduct operator maintenance	<p>3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>3.2. Mixing systems and components are flushed clean in line with site procedures and environmental requirements</p> <p>3.3. Blender system is isolated and cleaned in line with site procedures and environmental requirements</p> <p>3.4. Excess glue is disposed of and unused glue is stored or disposed of in, line with environmental regulations</p> <p>3.5. Machine area is kept clear of waste and debris in line with OHS requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely produce chip or fibre blends
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes to prepare chip or fibre blends
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for preparing chip or fibre blends
- Mixing and blending methodologies
- Chip and fibre blend production process
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce chip or fibre blends within

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>organisational requirements</p> <p>The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to preparing chip or fibre blends • following organisational policies and procedures relevant to preparing chip or fibre blends • producing chip or fibre blends in line with the work order and within prescribed organisational requirements • conducting operator maintenance on the mixing and blending equipment
Context of and specific resources for assessment	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills • Assessment methods must confirm the ability to access and correctly interpret and apply the required

EVIDENCE GUIDE

knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements
may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

Chip or fibre blends

is the output product as a result of smashing wood chips into chip or fibrous blends which is then used to produce panel products

Work order is to include:

- instructions for the preparation of chip or fibre blends

and may include:

- type
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Glue and other ingredients may include:

- application of enterprise specific recipes to blend chips or fibre using water based glues, resin based glues or synthetic glues

Equipment is to include:

- mixer with pre-programmed mix quantities and cycles with manually controlled feed, blender and transfer systems
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Mixing may include:

- type of blend
- recipes and mixing cycles as prescribed by the enterprise

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

RANGE STATEMENT

- body language
- Pre start-up checks** are conducted to ensure:
- machine has been set-up correctly
 - systems are performing accurately
 - machinery is operating to optimum performance
- Feed systems** are to include:
- filtrate
 - white water
 - stock level
 - fibre consistency
 - feed level
 - steam flow
 - raw water
 - noise
 - metal detectors
 - power consumption
- Records and reports** may include:
- product type
 - size
 - profile
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2206B Prepare veneer for ply

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to assemble the multiple layers of veneer to form plywood panel

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2206A Prepare veneer for ply

Application of the Unit

Application of the unit

The unit involves preparing veneer for ply in a forest products factory setting.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to preparing veneer for <i>ply</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of material to be assembled is acquired from the veneer production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Production process</i> is selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Bond veneers	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Spreader stations</i> are adjusted to provide material delivery in line with required board cross-section distribution</p> <p>2.3. <i>Glue feed, spread and tack levels</i> are regularly adjusted to apply glue to cross-grain <i>veneer</i> evenly</p>

ELEMENT	PERFORMANCE CRITERIA
	in line with operating procedures
	2.4.Veneer is positioned and fed to suit planned assembly with cross-grain and long grain veneer selected and assembled in the correct sequence
	2.5.Veneer is placed to minimise gaps and edge mismatch
	2.6.Completed assemblies are transferred for <i>pressing</i> in line with site requirements
	2.7.Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Redistribute material	3.1.Assembled ply is <i>graded</i> in line with site requirements and industry standards
	3.2.Material is directed and <i>moved to storage</i> or processing operations in line with site requirements
	3.3.Sub-standard material is rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	3.4.Excess glue is disposed of and unused glue is stored or disposed of, in line with environmental regulations
	3.5.Work area is cleaned in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and evenly apply glue; effectively grade assembled ply
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for preparing veneer for ply
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for preparing veneer for ply
- Environmental risks and hazards
- Ply production methods
- Veneer binding techniques
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently prepare veneer for ply in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the

EVIDENCE GUIDE

competency in this unit

requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to preparing veneer for ply
- following organisational policies and procedures relevant to preparing veneer for ply
- preparing veneer for ply in readiness for storage and/or processing
- operating glue spreading equipment to bond sheets of veneer
- redistributing material on site using designated equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions

RANGE STATEMENT

- relating to forest fire
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Ply

is strong panelling, varying in thickness, consisting of two or more plies of veneer alternating in grain direction, which are glued and pressed together

RANGE STATEMENT

Work order is to include:

- instructions for the receipt/despatch and assembling of ply from veneer to pressing and to/from the designated storage location or processing

and may include:

- type
- size
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment is to include:

- ply assembly tables with glue spreading stations

and may include:

- lifting equipment

Production process is to include:

- the glue mix used to bond sheets of veneer alternating in grain direction (to provide strength and rigidity) to form varying thickness sheets of plywood with a varying number of layers of veneer, before pressing
- use of a higher grade veneer on outer surfaces

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

RANGE STATEMENT

- machine has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

Spreader stations

are the booms which pour and spread the glue mix onto the veneer sheeting

Glue feed, spread and tack levels

- glue feed is the feed rate at which an amount of glue is transferred to the veneer sheet
- spread is the coverage of glue over the veneer sheet area
- tack level is the required degree of stickiness (governed by weather conditions) for the glue to assure a successful bond

Veneer

- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of plywood
- types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn

Pressing

is the process of securing the bond by placing the assembled ply sheeting in a large pressing machine to remove any air pockets or other abnormalities

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manually
- using a computer-based system or another appropriate organisational communication system

Grading

is the process of visually inspecting plywood to classify its quality and use after assembly has taken effect and to ensure the bonding process has

RANGE STATEMENT

- been successful
- Movement of material** may include:
- the use of:
- conveyor belt systems
 - track systems
 - lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
 - assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- Storage** may include:
- the use of:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Disposing of** may include:
- recycling sub-standard material
 - re-using sub-standard material

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2207B Scarf edges of veneer

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to scarf the edges of veneer to optimise the use of veneer in readiness for bonding to panel products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2207A Scarf edges of veneer

Application of the Unit

Application of the unit

The unit involves scarfing edges of veneer in a forest products factory.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for scarfing	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to scarfing edges of veneer are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of veneer to be <i>scarfed</i> is acquired from the <i>veneer</i> production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Scarfing sequence and <i>scarf angle</i> are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Scarf veneer	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Machine functions and <i>feed rate</i> are set for optimal recovery of product</p> <p>2.3. Scarfing method is selected in line with the veneer</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>being joined</p> <p>2.4.Veneer is positioned and fed at rate appropriate to the machine speed, capacity, veneer thickness and condition</p> <p>2.5.Sheets are <i>visually assessed</i> and scarfed to specification</p> <p>2.6.<i>Out-feed</i> is coordinated to ensure efficient recovery of scarfed material</p> <p>2.7.Scarfing processes and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>
3. Redistribute material	<p>3.1.Veneer is <i>regraded</i> and joins assessed in line with site requirements and industry standards</p> <p>3.2.Material is directed and <i>moved to storage</i> or processing operations in line with site requirements</p> <p>3.3.Sub-standard material is rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>3.4.Work area is cleaned in line with site requirements</p>
4. Conduct operator maintenance	<p>4.1.Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>4.2.Cutters or blades are checked for blunt or damaged condition in line with site procedures</p> <p>4.3.Cutters or blades are removed and replaced in line with manufacturer's recommendations</p> <p>4.4.Machine area is kept clear of dust, off-cuts and debris in line with OHS requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely scarf edges of veneer
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information

REQUIRED SKILLS AND KNOWLEDGE

- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for scarf edges of veneer
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for scarfing edges of veneer
- Environmental risks and hazards
- Veneer scarfing techniques
- Methods of visual inspection
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently scarf veneer in line with organisational

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>requirements</p> <p>The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to scarfing edges of veneer • following organisational policies and procedures relevant to scarfing edges of veneer • scarfing veneer in readiness for application to panel products or for interim storage • redistributing material on site using designated equipment
Context of and specific resources for assessment	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills • Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge • Assessment may be applied under project-related

EVIDENCE GUIDE

conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and

RANGE STATEMENT

substances

- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the scarfing of veneer

and may include:

RANGE STATEMENT

- species
 - colour
 - type, width
 - length, thickness
 - quantity
 - scarfing method
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Scarfing** is the process of overlapping the end or edge of one piece of veneer over the end or edge of another to extend the veneer and its application potential or to create a continuous role
- Veneer**
- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of plywood
 - types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn
- Equipment** may include:
- specialised scarfing machines
- and is to include:
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Scarf angle** is the angle at which the end of the veneer is tapered to allow overlap of the joining piece of veneer which has been scarfed at the opposing angle
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding

RANGE STATEMENT

- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

Feed rate is to include:

- the rate of speed the veneer is passed through the scarfing machine
- the impact on equipment
- the finish of the scarf
- the production output

Visually assessed is to include:

- strength
- overlaps
- gaps
- veneer faults
- joining spacings

Out-feed :

is the scarfed veneer produced from the machining operation

and includes:

- handling it in such a way as to ensure the thin edge is not broken or torn

Records and reports may include:

- scarfing requirements and angle
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another

RANGE STATEMENT

appropriate organisational communication system

Regrading

is the process of visually inspecting veneer to re-classify its quality and use after scarfing has taken effect

Movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position
- recycling sub-standard material

Disposing of may include:

RANGE STATEMENT

- re-using sub-standard material

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2208B Cut veneer

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to cut veneer to width, length and free of defects in readiness for bonding to panel products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2208A Cut peeled veneer

Application of the Unit

Application of the unit The unit involves cutting veneer in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cutting	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to <i>cutting veneer</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of veneer to be cut is acquired from the veneer production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Cutting process is selected and planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Cut veneer	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Conveyor</i> and <i>guillotine</i> operation is coordinated with veneer production</p> <p>2.3. Optimal cutting positions are selected to minimise</p>

ELEMENT	PERFORMANCE CRITERIA
	<i>defects</i> and maximise full width sheets
	2.4. Cutting is conducted and <i>feed rate</i> monitored in line with operational procedures
	2.5. Conveyors are regularly monitored for material flow problems
	2.6. Veneer is <i>visually assessed</i> through the cutting process
	2.7. Cutting process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Redistribute material	3.1. Material is directed and <i>moved to storage</i> or processing operations in line with site requirements
	3.2. Sub-standard material and off-cuts are rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	3.3. Work area is cleaned in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely cut veneer
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for cutting veneer

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for cutting veneer
- Environmental risks and hazards
- Veneer cutting techniques
- Methods of visual inspection
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently cut veneer in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to cutting veneer
- following organisational policies and procedures relevant to cutting veneer
- cutting veneer in readiness for application to panel

EVIDENCE GUIDE

- products or for interim storage
- redistributing material on site using designated equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements
may include:

Cutting

is the process of visually inspecting veneer to determine cuts

and is to include:

- optimising sheet sizes using power driven guillotines

Veneer

- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of plywood

- types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn

Work order is to include:

- instructions for the cutting of veneer

and may include:

RANGE STATEMENT

- species
- colour
- type
- width
- length
- thickness
- quantity
- cutting method
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- electronic guillotines
- conveyor belt systems

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

RANGE STATEMENT**Conveyor** is to include:

- belts or travelator methods of transporting veneer to and from the guillotine, which may be automated in conjunction with the veneer production process

Guillotine

is the piece of electronic equipment used to cut veneer, which can be computer programmed

Defects may include:

- incorrect moisture content
- warp
- wane
- shakes
- insect defects
- splits
- knots
- resin pockets

Feed rate is to include:

- the rate of speed the veneer is passed through the guillotine
- the impact on equipment
- the finish of the cut
- the production output

Visually assessed is to include:

- strength
- defects
- gaps
- other veneer faults

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Movement of material may include:

the use of:

- conveyor belt systems

RANGE STATEMENT

- track systems
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Disposing of may include:

- recycling sub-standard material and off-cuts
- re-using sub-standard material and off-cuts

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2209B Saw products from continuous ply

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare and saw panels to size from a roll of continuous ply with a power driven saw. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2209A Saw products from continuous ply

Application of the Unit

Application of the unit The unit involves sawing products from continuous ply in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cutting	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to sawing products from continuous ply are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>continuous ply</i> to be cut is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Material <i>cutting patterns and saw set-up sequences</i> are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Cut continuous ply to size	<p>2.1. Material is marked and stops set in preparation for cutting</p> <p>2.2. Ply is set-up on the in-feed and <i>feed systems</i> and rate regularly checked and adjusted</p>

ELEMENT	PERFORMANCE CRITERIA
	2.3. Cutting sequence and patterns are followed to produce the required quantity
	2.4. Cuts are checked for length or angle within a set <i>tolerance</i>
	2.5. Material with <i>defects</i> , incorrect cuts and off-cuts are <i>disposed of</i> in line with site procedures and environmental requirements
	2.6. Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel
	2.7. Material is safely <i>stacked</i> in a designated location in line with work order requirements
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. Saw blades are checked for blunt or damaged condition
	3.3. Saw blades are removed and replaced in line with manufacturer's recommendations
	3.4. Saw area is kept clear of dust, off-cuts and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely saw products from continuous ply
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for saw products from continuous ply

- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for sawing products from continuous ply
- Environmental risks and hazards
- Characteristics of continuous ply and timber panel defects
- Cutting patterns and sequences
- Saw blade condition assessment
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently saw products from continuous ply within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to sawing products from continuous ply

EVIDENCE GUIDE

- following organisational policies and procedures relevant to sawing products from continuous ply
 - sawing products from continuous ply in line with the work order and within prescribed organisational tolerances
 - conducting operator maintenance on a panel saw with carriage
 - stacking batches of cut material in line with organisational requirements and OHS regulations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT

may include:

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the cutting and despatch of timber panel products from the work site

and may include:

- type
- size
- length
- angle
- quantity

RANGE STATEMENT

- grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Continuous ply** is a role of ply which has been rotary peeled from a log
- Storage locations** may include:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** may include:
- measuring equipment
 - power operated, manually controlled docking and trimming saws with carriages where the cutting angle is controlled relative to the board guides and clamps
 - saws with adjustable angle
 - saws with one or multiple blades
 - bandsaws
 - panel saws
 - table saws

RANGE STATEMENT

- bench saws

and is to include:

- procedures for saw lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Cutting patterns and saw set-up sequences** are to include:
- single straight cuts and angles requiring one cutting
 - passes set for multiple cuts of the same size
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Feed systems** are to include:
- rollers which support the continuous ply
 - rate of speed they supply the continuous ply to the saw
- Tolerances** are a set limit for cutting over or under the required size within a set margin of acceptance usually + or - 0.5 mm or in line with order or organisational requirements
- Defects** may include:
- panel warp
 - wane
 - cupping and veneer or plywood defects including shakes
 - insect defects
 - knots
 - resin pockets
- Disposing of** may include:
- recycling timber with defects, incorrect cuts and off-cuts
 - re-using timber with defects, incorrect cuts and off-cuts
- Records and reports** may include:
- product type
 - size

RANGE STATEMENT

- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Stacking may include:

- preparing for transport
- categorising in common size, thickness, length and angle
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2210B Cut panels to profile

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare and cut panels to a profile, with shaping equipment, to produce moulded timber products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2210A Cut panels to profile

Application of the Unit

Application of the unit The unit involves cutting panels to profile in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------|---|
| 1. Prepare for profiling | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environment, legislative</i> and <i>organisational requirements</i> relevant to cutting panels to <i>profile</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>panels</i> to be profiled is selected from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Profile to be cut is identified and cutting blades selected</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Set up profiling equipment | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Machine guides</i> are selected and attached to the machinery</p> <p>2.3. Cutting blades are installed in the selected</p> |

ELEMENT**PERFORMANCE CRITERIA**

- machinery
- 2.4. Depth of cut/profile is set in line with the required profile and minimisation of waste
- 2.5. Panel stack is positioned in close proximity to maximise ease of machine feeding
- 2.6. Equipment set-up is checked and adjusted by running a panel through the machine to set depth and profile
3. Cut *material* to profile
- 3.1. Panels are fed into the machine at the *feed rate* prescribed by organisational requirements
- 3.2. Cutting sequence is followed, maintained and adjusted to produce the required quantity and maximise the feed rate
- 3.3. Profiling process is regularly checked and adjusted to maintain the desired depth and profile
- 3.4. Panels with *defects* are rejected and *disposed of* in line with site procedures and environmental requirements
- 3.5. Processing and equipment faults are reported to the appropriate personnel
- 3.6. Panels are safely *stacked* in a designated location in line with work order requirements
- 3.7. *Records and reports* are accurately completed, processed and maintained in line with workplace procedures
4. Conduct operator maintenance
- 4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
- 4.2. Cutting blades are checked for blunt or damaged condition in line with site procedures
- 4.3. Cutting blades are removed and replaced in line with manufacturer's recommendations
- 4.4. Machine area is kept clear of dust and debris in line with OHS requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely cut panels to profile
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for cutting panels to profile
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for cutting panels to profile
- Environmental risks and hazards
- Characteristics of panels and panel defects
- Cutting profiles, feed rates and finish
- Cutting blade condition assessment
- Storage Systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently cut panels to profile within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to cutting panels to profile
- following organisational policies and procedures relevant cutting panels to profile
- cutting panels to profile in line with the work order and within prescribed organisational specifications
- conducting operator maintenance on a multi-head planing machine
- stacking batches of cut panels in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and

RANGE STATEMENT

may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards

RANGE STATEMENT

- recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Profile** may include:
- various shapes and patterns to which steel cutting blades can be shaped, that will in turn shape the panel to achieve the desired profile outcome

profiled products may include:

- building components
 - furniture components
 - tops
 - quad
 - beading
 - mouldings
 - shaped beams
 - architraves
 - skirting boards
 - scotia
- Work order** is to include:
- instructions for the cutting
 - despatch of panel products from the work site

and may include:

- type
 - size
 - length
 - profile
 - thickness
 - quantity
 - grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers

RANGE STATEMENT

Material may include:

- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard
- other manufactured board products

Storage locations may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- measuring equipment
- multi-head planing machines (four siders)
- spindle moulders
- routing machines
- shaping machines
- profile cutting blades in various shapes and sizes

and is to include:

- procedures for machine lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening

RANGE STATEMENT

- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly
- cutters are installed accurately
- machinery is operating to optimum performance

Machine guides may include:

- machine manufacturer produced guides located strategically on the machine to maintain timber in straight feed and ensure consistency of profile cut
- enterprise produced guides/jigs to maintain consistency of timber against cutting blades

Disposing of may include:

- recycling panels with defects
- re-using panels with defects

Feed rate is to include:

- the rate of speed the panel is passed through the machine affecting the sharpness of the cutting blades
- the finish of the material
- the production output

Defects may include:

- warp
- wane
- cupping
- holes
- breakages
- lifting veneer
- bonding problems

Stacking may include:

- preparing for transport
- categorising in common size, length, thickness and angle
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Records and reports may include:

- product type
- size

RANGE STATEMENT

- profile
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP2211B Move material by transfer equipment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to move timber products using transfer cars and rail systems. The unit includes set-up and shut-down

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP2211A Move material by transfer equipment

Application of the Unit

Application of the unit The unit involves moving material by transfer equipment in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Prepare to move material by transfer equipment | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to moving <i>material</i> by transfer equipment are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of material to be moved is inspected and checked for potential hazards, obstructions and spillage in line with site procedures and environmental requirements</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Moving processes</i> are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Move material | <p>2.1. <i>Communication signals</i> are identified and nearby personnel notified of impending operation</p> |

ELEMENT	PERFORMANCE CRITERIA
	2.2. Material to be moved and loading point are identified from schedules, orders and instructions
	2.3. <i>Material dimensions and weight</i> are estimated to ensure the transfer equipment is kept stable and not overloaded
	2.4. Load is manoeuvred into position using relevant transfer car techniques in line with manufacturer's recommendations
	2.5. Material is moved using rail and transfer car in line with site requirements
	2.6. Moving processes and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Shut down equipment	3.1. Material is cleared from transfer car prior to shutdown
	3.2. <i>Shutdown</i> procedures are coordinated with other line operators and followed in line with OHS legislation and site procedures
	3.3. <i>Safety locks and brakes</i> are applied to prevent accidental movement of the equipment
	3.4. Routine post operational checks are conducted in line with organisational standard operating procedures
	3.5. Areas around rail system are cleared of material spillage in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely move material using transfer car
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work

REQUIRED SKILLS AND KNOWLEDGE

requirements; identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for moving material by transfer equipment
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for rail and transfer car operations
- Environmental risks and hazards
- Transfer car capacities and hazards
- Rail and transfer car shut-down procedures
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently move material by transfer car in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or

EVIDENCE GUIDE

Territory legislative and regulatory requirements and codes of practice relevant to moving material by transfer equipment

- following organisational policies and procedures relevant to moving material by transfer equipment
 - moving material by transfer car to convey material to or from production areas
 - redistributing material on site using rail and transfer car
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT

may include:

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Material may include:

- treated paper
- wood chips
- flakes
- wood fibre
- logs
- bark
- off-cuts
- timber
- raw board

RANGE STATEMENT

- Work order** is to include:
- panel products
 - veneer
 - instructions for the receipt/despatch and moving of timber and timber products to/from the designated storage location
- and may include:
- type
 - size
 - quantity
 - grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** may include:
- rail and electrically powered rail mounted transfer car systems
 - 'follow me' trolleys
 - electronic-eye trolleys used in layup
- Moving process** is to include:
- the control of rail and transfer car systems including start-up and shut-down
 - monitoring of hazards
 - weight and oversize objects
 - control of loading and unloading points
 - communication signals
 - observation of other personnel
 - minimising carbon emissions
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences

RANGE STATEMENT

- Communication signals** may include:
- control of tone of voice
 - body language
 - hand signals
 - whistles
 - sirens
 - loud speaker announcements
 - warning signals
 - two way radios
- Material dimensions and weight** are to include:
- monitoring of articles or products which may be unstable
 - oversize or over the weight capacity of the transfer car requiring redistribution or alternate transfer
- Records and reports** may include:
- rail and transfer car operations
 - product types
 - size
 - inspection and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system
- Shutdown** is to include:
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machinery from the power source
 - cleaning and maintaining all parts
- Safety locks and brakes** are applied to the transfer car to prevent it from movement during shut-down

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3201B Produce veneer from debarked logs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to operate a specialised peeling lathe or rotary slicer to produce sheets of timber veneer from debarked logs. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3201A Produce veneer from debarked logs

Application of the Unit

Application of the unit The unit involves producing veneer from debarked logs in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for peeling	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to producing veneer from debarked <i>logs</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of timber species to be <i>peeled or sliced</i> is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Veneer</i> peeling or slicing process and thickness are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Peel veneer	<p>2.1. Size and condition of logs is checked as acceptable and then loaded into the lathe</p> <p>2.2. <i>Drive logs</i> are placed to maximise available veneer and waste product removed</p>

ELEMENT	PERFORMANCE CRITERIA
	2.3.Veneer peeling or slicing process is set and commenced to optimise veneer recovery and <i>grading</i>
	2.4.Machine speed and control of veneer cut are constantly adjusted to suit the log characteristics in line with site procedures
	2.5.Material with <i>defects</i> and <i>log cores</i> are <i>disposed of</i> in line with site procedures and environmental requirements
	2.6.Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Conduct operator maintenance	3.1.Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2.Cutting blades are checked for blunt or damaged condition in line with site procedures
	3.3.Cutting blades are removed and replaced in line with manufacturer's recommendations
	3.4.Machine area is kept clear of dust, off-cuts and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely peel or slice veneer using a rotating lathe or rotary slicer
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing veneer from debarked logs
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing veneer from debarked logs
- Environmental risks and hazards
- Characteristics of logs and timber defects
- Peeling and slicing processes using a rotating lathe or rotary slicer
- Cutting blade condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce veneer from debarked logs within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to producing veneer from debarked logs

EVIDENCE GUIDE

- following organisational policies and procedures relevant to producing veneer from debarked logs
 - producing veneer from debarked logs in line with the work order and within prescribed organisational tolerances using a rotating lathe or rotary slicer
 - conduct operator maintenance on a peeling lathe or rotary slicer
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow with relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency

EVIDENCE GUIDE

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Logs** may include:
- varying species which have been kiln or air-dried and de-barked and are usually consistently round and straight
- Work order** is to include:
- instructions for the cutting and grade of timber veneer from debarked logs
- and may include:
- type
 - width
 - length
 - thickness

RANGE STATEMENT

- quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Peeling or slicing** is the process of removing timber in thin sheet form from a rotating lathe or rotary slicer
- Storage locations** may include: the use of:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** is to include:
- specialised veneer peeling lathes or rotary slicer
 - procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Veneer**
- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of

RANGE STATEMENT

- Communication** may include:
- plywood
 - types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn
 - verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Drive logs** is the log set-up and being utilised for veneer peeling to produce rotary (radial) sawn veneer
- Grading** is the process of visually inspecting logs or timber to classify their quality and use
- Defects** may include:
- warp
 - wane
 - cupping
 - shakes
 - insect defects
 - knots
 - resin pockets
- Log cores** are the remaining centre (pith) part of the log which is too small to remove further veneer from
- Disposing of** may include:
- recycling material with defects and timber cores
 - re-using material with defects and timber cores
- Records and reports** may include:
- product type
 - size
 - profile
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards

RANGE STATEMENT

- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3202B Paint panels

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to paint panels with water based paints using roller coating line, spray booth or curtain coating equipment for the purposes of finish coating wood panel products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3202A paint panels

Application of the Unit

Application of the unit

The unit involves painting panels in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|--|
| 1. Prepare for painting | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to painting panels are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>panels</i> to be painted is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Panel <i>painting process, feed rates</i> and <i>paints</i> are selected and planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Paint panels | <p>2.1. Paint products are loaded in equipment in line with manufacturer's specifications</p> <p>2.2. Paint is applied with flow rates and <i>viscosity</i> continually monitored and adjusted in line with site</p> |

ELEMENT	PERFORMANCE CRITERIA
	requirements
	2.3. <i>Paint operations</i> are continually checked with blockages and filters cleared to maintain paint coverage to specifications
	2.4. Panels are regularly checked for surface quality and <i>contamination</i> , and <i>graded</i> in line with site requirements and corrective action taken
	2.5. Sub-standard panels are removed from the painting process and reviewed for <i>further action</i>
	2.6. Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel
	2.7. Material is safely dried and <i>stacked</i> in a designated location in line with work order requirements
3. Shut down and clean equipment	3.1. <i>Shutdown</i> procedures are coordinated with other line operators and followed in line with OHS legislation and site procedures
	3.2. Pumps are turned off and equipment flushed in line with organisational standard operating procedures
	3.3. Excess paint and flushing liquid are disposed of in line with statutory requirements and environmental regulations
	3.4. Equipment and paint are stored in line with statutory requirements and environmental regulations

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely paint panels
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and

REQUIRED SKILLS AND KNOWLEDGE

demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for paint panels
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for painting panels
- Environmental risks and hazards
- Characteristics of timber panels
- Paints, their viscosity, film thickness, film wetness and feed rates
- Paint operations and shut sown procedures
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently paint panels within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include

EVIDENCE GUIDE

demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to painting panels
- following organisational policies and procedures relevant to painting panels
- painting panels in line with the work order and within prescribed organisational requirements
- conducting spray or roller coating operations and shut-down procedures
- stacking batches of painted panels in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements** may include:
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the painting of timber panel products
- and may include:
- type
 - size

RANGE STATEMENT

- length
- thickness
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Panels may include:

- medium density fibreboard
- chipboard
- fibreboard
- plywood
- other manufactured board products

Storage locations may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- roller coating lines
- spray booths

RANGE STATEMENT

- curtain coating lines
 - trays
 - overflow trays
 - thinner reservoirs
 - spray guns
 - roller coaters
- Painting process** includes:
- the application of paint to coat wood panel products for customer orders
- and may include:
- application of paint coats ensuring viscosity
 - film thickness
 - film wetness
 - rate of application to ensure surface integrity
- Feed rates** are to include:
- the rate of speed the paint is passed through the spray or roller coating equipment affecting the risk of equipment blockage
 - the finish of the material
 - the production output
- Paints** are to include:
- water based paints
- and may include:
- oil based paints
 - solvent based paints
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Viscosity** is the amount of resistance to flow or stickiness of the paint
- Paint operations**
- see equipment and painting process
- Contamination** may include:
- dust
 - water spots

RANGE STATEMENT

- oil spots from equipment or oily finger prints and may cause orange peel effect
- incomplete cover
- solvent boil
- other coating defects

Grading

is the quality checking of finished products to determine surface integrity and classify products into levels of quality

Further action may include:

- re-painting sub-standard panels
- recycling sub-standard panels
- re-using sub-standard panels

Records and reports may include:

- painting method
- product type
- feed rate
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Stacking may include:

- preparing for transport
- categorising in common size, thickness, length, coating
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Shutdown is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- cleaning and maintaining all parts
- storage of paints

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3203B Produce fibre from chips

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate specialist equipment to produce wood fibre in readiness for the production of medium density fibreboard, while monitoring and maintaining the flow of operation. The unit includes assessment of chips and set-up of equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3203A Produce fibre from chips

Application of the Unit

Application of the unit

The unit involves producing fibre from chips in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for fibre production	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to producing <i>fibre</i> from <i>chips</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of chips are <i>assessed</i> and acquired from the <i>stockpile</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Defibrator</i> process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Produce fibre	3.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements
3. Conduct operator maintenance	3.2. <i>Defibrator</i> and <i>feed systems</i> are started and adjusted to produce fibre size in line with organisational

ELEMENT**PERFORMANCE CRITERIA**

- requirements
- 3.3. Fibre production is regularly checked to ensure it conforms with organisational requirements
 - 3.4. Chip flow and *pulp* out-feed are monitored to ensure optimal production rate and prevent blockages
 - 3.5. Output of fibre is directed to storage bins in line with prescribed fill levels
 - 3.6. Faults requiring *emergency shutdown* are detected and action taken to rectify the problem
 - 3.7. Sub-standard fibre is rejected and *disposed of* in line with site procedures and environmental requirements
 - 3.8. Processing and equipment faults are *recorded and reported* to the appropriate personnel
 - 3.9. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
 - 3.10. Defibrator blades are checked for blunt or damaged condition in line with site procedures
 - 3.11. Defibrator components are cleaned in line with manufacturer's recommendations
 - 3.12. Machine area is kept clear of dust and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely produce fibre from chips
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing fibre from chips
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing fibre from chips
- Environmental risks and hazards
- Characteristics of wood chips and stock levels
- Fibre production process
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce fibre from chips within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and

EVIDENCE GUIDE

codes of practice relevant to producing fibre from chips

- following organisational policies and procedures relevant to producing fibre from chips
- producing fibre from chips in line with the work order and within prescribed organisational requirements
- conducting operator maintenance on a defibrator
- storing produced fibre in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred

EVIDENCE GUIDE

to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

RANGE STATEMENT

Environmental requirements
may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Fibre

is the output product as a result of smashing wood chips into fibrous material which is then used to produce medium density fibreboard

Chips

- are the raw product used to produce fibre
- are an output of breaking down logs into wood chips approximately the size of a 50 cent coin

RANGE STATEMENT

Work order is to include:

- instructions for the assessment of chips and the fibre grade

and may include:

- feed rate and quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Assessing chips is to include:

- species
- size
- moisture content
- contamination issues

Stockpile

is the piles of available chips ready for conversion to fibre, classified in size and species

Equipment is to include:

- procedures for equipment lock-out, i.e. protecting operators and co-workers from accidental injury by isolating the machine from the power source

Defibrator

is the machine used to convert wood chips to fibre for the production of medium density fibreboard

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly
- systems are performing accurately

RANGE STATEMENT

- Feed systems** are to include:
- machinery is operating to optimum performance
 - filtrate
 - white water
 - stock level
 - fibre consistency
 - feed level
 - steam flow
 - raw water
 - noise
 - metal detectors
 - power consumption
- Pulp** is the unwanted waste by-product from producing fibre
- Emergency shutdown** is the immediate shutting off of the equipment to prevent an accident or prevent damage to the machine or product
- Disposing of** may include:
- recycling sub-standard fibre
 - re-using sub-standard fibre
- Records and reports** may include:
- product type
 - size
 - profile
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3204B Form board

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to conduct the board forming process to produce chipboard and fibreboard. The unit includes shut-down and cleaning of equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3204A Form board

Application of the Unit

Application of the unit

The unit involves forming board in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for forming	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>form board</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>flakes or fibre</i> is <i>assessed</i> and acquired from the <i>stockpile</i> or <i>storage bins</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Forming process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Form board	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Stock tanks</i> are maintained at the correct levels in line with organisational requirements</p>

ELEMENT**PERFORMANCE CRITERIA**

- 2.3. *Spreader stations* are adjusted to provide material delivery in line with required board cross-section distribution
- 2.4. Operational condition and set-up of former is checked to confirm mat condition
- 2.5. *Forming equipment* is checked for defects and positioned to load press in line with operating procedures
- 2.6. *Former and forming line* are started, operated and adjusted to produce board in line with organisational requirements
- 2.7. Slitters/saws are set to cut formed mat to width and length
- 2.8. Sub-standard board is rejected and *disposed of* in line with site procedures and environmental requirements
- 2.9. Faults requiring *emergency shutdown* are detected and action taken to rectify the problem
3. Shut down and clean equipment
- 3.1. Material is cleared from conveyor belts prior to shut-down in accordance with site procedures
- 3.2. *Shutdown* procedures are coordinated with other line operators and followed in accordance with OHS legislation and site procedures
- 3.3. Routine post operational checks are conducted in accordance with organisational standard operating procedures
- 3.4. Areas around conveyors and forming stations are cleared of material spillage
- 3.5. Spreading stations, formers and forming lines are cleaned internally and externally in accordance with organisational requirements
- 3.6. Processing and equipment faults are *recorded and reported* to the appropriate personnel

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely produce form board
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing form board
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing form board
- Environmental risks and hazards
- Characteristics of wood chips, fibre and stock levels
- Board forming process
- Material delivery rates
- Composition of chipboard and fibreboard
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently form boards within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to form board
- following organisational policies and procedures relevant to form board
- forming boards in line with the work order and within prescribed organisational requirements using spreader station, former and forming line
- conducting operator shut-down and cleaning of equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE

application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

RANGE STATEMENT

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage

RANGE STATEMENT

requirements

- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Forming board

is the process of spreading mixture over a former in line with order size and pressing it with heat and pressure to produce a hard panel

Work order is to include:

- instructions for the receipt/despatch of formed boards to/from the designated storage location or processing

and may include:

- type
- size
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Fibre or flakes assessment

- fibre is the output product as a result of smashing wood chips into fibrous material which is then used to produce medium density fibreboard
- flakes are used to produce chipboard and are another process of breaking down wood or wood chips

assessment may include:

- species
- size
- grade
- moisture content
- contamination issues

Stockpile

is the pile of available flakes ready for board forming, classified in size and species

Storage bins

- are the catchment bins used to collect fibre

RANGE STATEMENT

- after conversion of chips to fibre
- store fibre until ready for use in board production
 - spreading stations
 - formers and forming lines
 - slitters/saws
 - screens
 - cleaning equipment
- Equipment** is to include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Communication** may include:
- Pre start-up checks** are conducted to ensure:
- equipment has been set-up correctly
 - systems are performing accurately
 - machinery is operating to optimum performance
- Stock tanks**
- are the tanks which hold the wet fibre or flake mix to be spread on the forming line
 - provide product to the spreader stations
- Spreader stations** are the booms which pour and spread the glue mix onto the board in readiness for adhering laminate or veneer
- Forming equipment** is to include:
- mats
 - screens
 - trays
 - plates
- Former and forming line**
- forming line collects the product and provides a base for the former to convert the product into solid pressed board which is in-turn cut by the slitters/saws to form rough sized sheets
- Disposing of** may include:
- recycling sub-standard board
 - re-using sub-standard board

RANGE STATEMENT

Emergency shutdown

is the immediate shutting off of the equipment to prevent an accident or prevent damage to the machine or product

Shut down is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- cleaning and maintaining all parts

Records and reports may include:

- product type
- size
- thickness
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field

Wood Panel Products

FPIWPP3205B Match and join veneer

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to match, stitch, tape or glue slices of veneer in readiness for bonding to panel products

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3205A Match and join veneer

Application of the Unit

Application of the unit The unit involves matching and joining veneer in a forest products factory.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------|---|
| 1. Prepare for joining veneer | <ul style="list-style-type: none"> 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>matching and joining veneer</i> are identified and complied with 1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> 1.3. Type and quantity of veneer to be matched and joined is acquired from the veneer production process 1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Matching and joining process is selected in accordance with site procedures 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Match and join veneer | <ul style="list-style-type: none"> 2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements 2.2. Machine functions and <i>feed rate</i> are set for optimal recovery of product |

ELEMENT	PERFORMANCE CRITERIA
	2.3. Joining method is selected in line with the veneer being matched
	2.4. Sheets are <i>visually assessed</i> and matched to specification
	2.5. Sheets are <i>clipped</i> to provide clean edges and joined in line with organisational requirements
	2.6. Matching and joining processes are <i>recorded and reported</i> to the appropriate personnel
3. Redistribute material	3.1. Veneer is <i>regraded</i> and joins assessed in line with site requirements and industry standards
	3.2. Material is directed and <i>moved to storage</i> or processing operations in line with site requirements
	3.3. Sub-standard material is rejected and <i>disposed of</i> in accordance with site procedures and environmental requirements
	3.4. Excess glue is disposed of and unused glue is stored or disposed of, in line with environmental regulations
	3.5. Work area is cleaned in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely match and join veneer
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Basic knowledge and understanding of applicable Commonwealth, State or

REQUIRED SKILLS AND KNOWLEDGE

Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for match and join veneer

- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for matching and joining veneer
- Environmental risks and hazards
- Veneer matching and joining techniques
- Methods of visual inspection
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently match and join veneer in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to matching and joining

EVIDENCE GUIDE

veneer

- following organisational policies and procedures relevant to matching and joining veneer
- match and join veneer in readiness for application to panel products or for interim storage
- redistributing material on site using designated equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency

EVIDENCE GUIDE

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Match and join veneer

matching may include:

- matching grain
- grade
- length
- book matching
- colour matching

joining veneer may include:

- stitching
- gluing

RANGE STATEMENT

- Work order** is to include:
- taping
 - instructions for the matching and joining of veneer
- and may include:
- species
 - colour
 - type
 - width
 - length
 - thickness
 - quantity matching method
 - joining method
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** may include:
- clipping machines
 - guillotines
 - veneer sewing equipment
 - veneer gluing equipment
 - veneer taping equipment
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Pre start-up checks** are conducted to ensure:
- machine has been set-up correctly

RANGE STATEMENT

- systems are performing accurately
 - machinery is operating to optimum performance
- Feed rate** is to include:
- the rate of speed the veneer is passed through the joining machine
 - the impact on binding materials
 - the finish of the join
 - the production output
- Visually assessed** is to include:
- strength
 - overlaps
 - gaps
 - veneer faults
 - joining spacings
- Clipping** is to include:
- cutting or guillotining of veneer to form a straight edge
 - removing defects
 - splits or uneven edges
- Records and reports** may include:
- product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manually
 - using a computer-based system or other appropriate organisational communication system
- Regrading** is the process of visually inspecting veneer to re-classify its quality and use after matching and joining has taken effect
- Movement of material** may include:
- the use of:
- conveyor belt systems
 - track systems
 - lifting equipment

RANGE STATEMENT

lifting equipment such as:

- fork lifts
- slings
- trolley jacks
- gantry cranes
- loaders

assistance with lifting such as:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position
- recycling sub-standard material
- re-using sub-standard material

Disposing of may include:

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3206B Laminate and veneer board surfaces

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to set-up, operate and shut-down equipment used to apply laminate and veneer to board surfaces

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3206A Laminate or veneer board surfaces

Application of the Unit

Application of the unit The unit involves laminating and veneering board surfaces in a forest products factory.

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for application	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>laminating</i> and <i>veneering</i> board surfaces are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of laminate or veneer and <i>board</i> to be adhered is acquired from the production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Production process</i> is selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Apply laminate or veneer	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Veneer or laminate and board are loaded and fed to suit planned assembly in the correct sequence</p>

ELEMENT**PERFORMANCE CRITERIA**

- 2.3. *Spreader stations* are adjusted to provide material delivery in line with required board cross-section distribution
- 2.4. *Glue feed, spread and tack levels* are regularly adjusted to apply glue to board evenly and ensure it remains free from foreign material likely to cause contamination
- 2.5. *Heat rolling* process is regularly checked to prevent creases, bubbles or other surface defects
- 2.6. Laminate or veneer is routinely monitored for position, adhesion, contamination, finish and *trim tolerances*
- 2.7. Finished panels are *transferred* for further processing in line with site requirements
- 2.8. Processing and equipment faults are *recorded and reported* to the appropriate personnel
- 2.9. Sub-standard material is rejected and *disposed of* in line with site procedures and environmental requirements
3. Shut down and clean equipment
- 3.1. *Shutdown* procedures are coordinated with other line operators and followed in line with OHS legislation and site procedures
- 3.2. Gluing equipment, rollers, cauls, screens and handling equipment are stripped, cleaned and replaced if necessary in line with site operating procedures
- 3.3. Cutters or blades are checked for blunt or damaged condition
- 3.4. Cutters or blades are removed and replaced in line with manufacturer's recommendations
- 3.5. Machine area is kept clear of foreign material, dust and debris in line with OHS requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

REQUIRED SKILLS AND KNOWLEDGE

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely laminate and veneer board surfaces
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Basic knowledge and understanding of applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes to laminate and veneer board surfaces
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment.
- Organisational and site standards, requirements, policies and procedures for laminating and veneering board surfaces
- Environmental risks and hazards
- Laminate and veneer application processes
- Veneer, laminate and board characteristics
- Bonding methods
- Distribution processes
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently laminate and veneer board surfaces in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to laminating and veneering board surfaces
- following organisational policies and procedures relevant to laminating and veneering board surfaces
- effective communication and safe work practices
- laminating and veneering board surfaces in readiness for storage and/or processing
- operate glue spreading equipment to bond veneer or laminate to board
- redistributing material on site using designated equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package

EVIDENCE GUIDE

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Laminate

is usually a thin synthetic or vinyl manufactured sheeting supplied in rolls

Veneer

- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of plywood
- types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn

Work order is to include:

- instructions for the receipt/despatch and laminating or veneering of board surfaces to/from the designated storage location or processing

and may include:

- type
- size
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Board may include:

- medium density fibreboard
- chipboard
- fibreboard
- plywood
- other manufactured board products

Equipment is to include:

- laminate and veneer bonding machines
- ancillary equipment with glue spreading

RANGE STATEMENT

stations

- heat rollers

and may include:

- accumulators for continuous operation
- lifting equipment

Production process is to include:

- the glue mix used to bond sheets of veneer or laminate to varying types of board including panel size, panel thickness, laminate or veneer type, glue application and finishing processes

and may include:

- the process of trimming laminate or veneer to a square edge or bevel

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

Spreader stations

are the booms which pour and spread the glue mix onto the board in readiness for adhering laminate or veneer

Glue feed, spread and tack levels

- glue feed is the feed rate at which an amount of glue is transferred to the board
- spread is the coverage of glue over the board area
- tack level is the required degree of stickiness (governed by weather conditions) for the glue to guarantee a successful bond

Heat rolling

are the parts which ensure a secure and flat bond

RANGE STATEMENT

of the laminate or veneer to the board, these follow the bonding process closely

Trim tolerances:

are enterprise specified overhang of laminate or veneer to be trimmed, avoiding situations where board is not adequately covered

Transferral may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment

lifting equipment such as:

- fork lifts
- slings
- trolley jacks
- gantry cranes
- loaders

assistance with lifting such as:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manually
- using a computer-based system or other appropriate organisational communication system

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Shutdown is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine

RANGE STATEMENT

from the power source cleaning and
maintaining all parts

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3207B Clip veneer

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to clip veneer in readiness for matching and bonding to panel products. The unit includes sorting clipped veneer

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3207A Clip veneer

Application of the Unit

Application of the unit

The unit involves clipping veneer in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for clipping veneer	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to clipping veneer are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>veneer</i> to be <i>clipped</i> is acquired from the veneer production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Clipping process is selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Clip veneer	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Clipping machine functions are set for optimal recovery of product</p> <p>2.3. <i>Clipping pattern</i> is selected in line with the veneer</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>being matched</p> <p>2.4. Sheets are <i>visually assessed</i> to specification</p> <p>2.5. Sheets are clipped to size, removing all unwanted sections and providing clean edges in line with organisational requirements</p> <p>2.6. Clipping process and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>
3. Sort and redistribute veneer	<p>3.1. Veneer is <i>regraded</i> in line with industry standards and classified into grade, colour and match groupings</p> <p>3.2. Material is directed and <i>moved to storage</i> or processing operations in line with site requirements</p> <p>3.3. Sub-standard material is rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>3.4. Work area is cleaned in line with site requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely clip veneer
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for clipping veneer
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment

REQUIRED SKILLS AND KNOWLEDGE

- Organisational and site standards, requirements, policies and procedures for clipping veneer
- Environmental risks and hazards
- Veneer clipping techniques
- Methods of visual inspection
- Sorting and distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently clip veneer in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to clipping veneer
- following organisational policies and procedures relevant to clipping veneer
- clip veneer in readiness for matching and the application to panel products or for interim storage
- sort and redistribute material on site using designated

EVIDENCE GUIDE

Context of and specific resources for assessment

equipment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the clipping of veneer
- and may include:
- species
 - colour
 - type
 - width
 - length
 - thickness
 - quantity matching method
 - joining method
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may
- supervisors

RANGE STATEMENT

include:

- suppliers
- clients
- colleagues
- managers

Veneer

- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of plywood
- types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn

Clipping

is the cutting or guillotining of veneer to form a straight edge, remove defects, splits or uneven edges

Equipment may include:

- measuring tapes
- dial gauges
- clipping machines
- guillotines

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

Clipping pattern

is the assessment of the available veneer to determine useable section which in turn will be marked and cut

Visually assessed is to include:

- dimension
- edge condition
- position and size of knots

RANGE STATEMENT

- Records and reports** may include:
- other defects
 - product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Regrading

is the process of visually inspecting veneer to re-classify its quality and use after clipping has taken effect

Movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes

RANGE STATEMENT

- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position
- recycling sub-standard material
- re-using sub-standard material

Disposing of may include:

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3208B Punch peg holes in panels

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to punch peg holes in thin panel products to produce a peg board, using a hole punching machine

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3208A Punch peg holes in panels

Application of the Unit

Application of the unit The unit involves punching peg holes in panels in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------------|--|
| 1. Prepare for hole punching | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to punching <i>peg holes</i> in panels are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be <i>punched</i> is selected from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Punching process and hole lay out are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Punch peg holes | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Material is fed into the machine at the <i>feed rate</i> prescribed by organisational requirements</p> |

ELEMENT**PERFORMANCE CRITERIA**

- | | | |
|----|------------------------------|--|
| 3. | Conduct operator maintenance | 2.3. Punching sequence is followed, maintained and adjusted to produce the required quantity and maximise the feed rate
2.4. Punching process is regularly checked and adjusted to maintain the desired quality and output
2.5. Material with <i>defects</i> is rejected and <i>disposed of</i> in line with site procedures and environmental requirements
2.6. Punching process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
2.7. Material is safely <i>stacked</i> in a designated location in line with work order requirements
3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
3.2. Punches are checked for blunt or damaged condition in line with site procedures
3.3. Punches are removed and replaced in line with manufacturer's recommendations
3.4. Machine area is kept clear of dust and debris in line with OHS requirements |
|----|------------------------------|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely punch peg holes in panels
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for punching peg holes in panels
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for punching peg holes in panels
- Environmental risks and hazards
- Types of punched panels
- Characteristics of timber and timber defects
- Punching processes, feed rates and finish
- Punch condition assessment
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently punch peg holes in panels within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or

EVIDENCE GUIDE

Territory legislative and regulatory requirements and codes of practice relevant to punch peg holes in panels

- following organisational policies and procedures relevant to punch peg holes in panels
 - punching peg holes in panels in line with the work order and within prescribed organisational specifications
 - conducting operator maintenance on machine punching equipment
 - stacking batches of cut material in line with organisational requirements and OHS regulations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that

EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire

RANGE STATEMENT

- Environmental requirements** may include:
- manual handling including shifting, lifting and carrying
 - legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Peg holes are small diameter holes punched in panel approximately 10 cm apart (or to enterprise or customer specification) horizontally and diagonally over the entirety of the panel

Work order is to include:

- instructions for the punching and despatch of

RANGE STATEMENT

timber panel products from the work site
and may include:

- punching process
- type
- size
- length
- width
- thickness
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- medium density fibreboard
- chipboard
- fibreboard
- other manufactured board products, usually thinner stock of approximately 3-10 cm thick

Punching

is the process of punching multiple holes through thin panel simultaneously to a planned hole layout, in line with enterprise or customer specifications

Storage locations may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification

RANGE STATEMENT

- product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** may include:
- measuring equipment
 - punching machines
- and is to include:
- procedures for machine lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Pre start-up checks** are conducted to ensure:
- machine has been set-up correctly
 - punches are installed accurately
 - machinery is operating to optimum performance
- Feed rate** is the rate of speed the material is passed through the machine affecting the sharpness of the punches, the finish of the material and the production output
- Defects** may include:
- warp
 - wane
 - cupping
 - incorrect margins

RANGE STATEMENT

- incorrect patterns
 - doglegs
 - broken punches
- Disposing of** may include:
- recycling material with defects
 - re-using material with defects
- Records and reports** may include:
- punching sequence
 - product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system
- Stacking** may include:
- preparing for transport
- categorising in machining process, common size, length and thickness
- marking lots in line with work order and site requirements
 - locating so as not to block access or passage

Unit Sector(s)

Unit sector No sector assigned

Co-prerequisite units

Co-prerequisite units

Co-prerequisite units

Competency field

Competency field Wood Panel Products

FPIWPP3209B Prepare resin and additives

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to prepare and mix glue together with operating ancillary equipment associated with raw board, veneering and laminating

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3209A Prepare resin and additives

Application of the Unit

Application of the unit

The unit involves preparing resin and additives in forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for mixing	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to preparing <i>resin</i> and additives are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>glue or resin</i> to be <i>mixed</i> is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Mixing process is selected and planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Mix glue	<p>2.1. Resin or glue ingredients and <i>additives</i> are measured and mixed ensuring minimum wastage in line with site requirements</p> <p>2.2. Mix is transferred to appropriate storage location or</p>

ELEMENT	PERFORMANCE CRITERIA
	production equipment without contamination through <i>transfer lines</i>
	2.3. Addition rate of resins or additives is monitored and pumps adjusted
	2.4. Samples of mix are regularly taken for <i>testing</i> in line with standard operating procedures
	2.5. Mixing processes and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Maintain and clean equipment	3.1. Mixing, storage and transfer equipment are cleaned to organisation requirements
	3.2. Pumps are turned off and equipment flushed in line with organisational standard operating procedures
	3.3. Excess glue or resin and additives are disposed of in line with statutory requirements and environmental regulations
	3.4. Equipment and ingredients are stored in line with statutory requirements and environmental regulations

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely prepare resin and additives
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for preparing resin and additives

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for preparing resin and additives
- Environmental risks and hazards
- Additive and resin types and uses
- Characteristics of glue, resin and additives
- Weather conditions affecting bonding times
- Mixing operations and maintenance procedures
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently prepare resin and additives within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to preparing resin and additives

EVIDENCE GUIDE

- following organisational policies and procedures relevant to preparing resin and additives
 - preparing resin and additives in line with the work order and within prescribed organisational requirements
 - conducting mixing operations and maintenance procedures
 - storing batches of adhesive in line with organisational requirements and OHS regulations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT

may include:

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the mixing of additives and resin

and may include:

- type
- quantity
- setting rate
- mixing percentages
- additives

RANGE STATEMENT

- hardness
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Glue and resin** may include:
- synthetic or animal based adhesives such as casein
 - rubber based adhesives
 - poly vinyl acetate
 - epoxy resins
 - formaldehydes
- Mixing:**
- usually includes mixing a base ingredient with a harder ingredient to aid setting plus any specified additives to specified quantities
 - can occur manually or mechanically
- Storage locations** may include:
- drums kept in flammable goods storage areas
 - plastic tubs kept in flammable goods storage areas
- Equipment** may include:
- mixers with manually controlled feed
 - mixers with pre-programmed mix quantities
 - cycles
 - transfer pumps
 - valves
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Additives** may include:
- agents which harden, soften, accelerate or decelerate glue or resin setting

RANGE STATEMENT

Transfer lines may include:

- transfer of ingredients to the mixers
- transfer of the mixed glue to storage or production

Testing is to include:

regular sampling of the glue, additives or resin to check:

- mix quantities
- setting speed (is it going off?)
- how weather conditions may be affecting the process

Records and reports may include:

- testing results
- quantities produced
- condition changes
- production difficulties
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3210B Laminate board

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to set-up, operate and shut-down the laminating press and ancillary equipment used to laminate board with treated material

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3410A Laminate board

Application of the Unit

Application of the unit The unit involves laminate board in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for laminating	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to <i>laminating board</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>board</i> and <i>material</i> to be laminated is acquired from the production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Production process</i> is selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Laminate board	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Material and board are loaded and fed to suit planned assembly in the correct sequence</p> <p>2.3. <i>Pressing</i> process is regularly checked to prevent</p>

ELEMENT	PERFORMANCE CRITERIA
	creases, bubbles or other surface defects
	2.4. Board and material lay up are routinely monitored for position, adhesion, contamination and finish
	2.5. Finished panels are <i>transferred</i> for further processing in line with site requirements
	2.6. Laminating process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
	2.7. Sub-standard material is rejected and <i>disposed of</i> in line with site procedures and environmental requirements
3. Shut down and clean equipment	3.1. <i>Shutdown</i> procedures are coordinated with other line operators and followed in line with OHS legislation and site procedures
	3.2. Laminating press and equipment are stripped and cleaned in line with site operating procedures
	3.3. Excess bonding agent is disposed of and unused bonding agent is stored or disposed of in line with environmental regulations
	3.4. Machine area is kept clear of foreign material, dust and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely laminate board
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for laminating board
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment.
- Organisational and site standards, requirements, policies and procedures for laminating board
- Environmental risks and hazards
- Treated material application processes
- Treated material and board characteristics
- Bonding methods
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently laminate board in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

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- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to laminating board
 - following organisational policies and procedures relevant to laminating board
 - laminating board in readiness for storage and/or processing
 - operating laminating press equipment to bond paper or laminate to board
 - redistributing material on site using designated equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and

RANGE STATEMENT

- carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Laminating board** is to include:
- the bonding agent mix used to bond and press sheets of material (such as paper) to varying types of board, including panel size, panel thickness, and finishing processes
- and may include:
- the process of trimming material to a square

RANGE STATEMENT

- Work order** is to include:
- edge or bevel
 - instructions for the receipt/despatch and pressing of board to/from the designated storage location or processing
- and may include:
- texture
 - colour
 - type
 - size
 - thickness
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Board** may include:
- medium density fibreboard
 - chipboard
 - plywood
 - fibreboard
 - other manufactured board products
- Material** may be:
- a treated paper in roll form, often impregnated with a durable resin
- and can be:
- decorative or for construction purposes
- and may include:
- laminate
 - veneer
 - treated paper
- Equipment** is to include:
- laminating press with bond spreading stations
 - feeding systems
- and may include:
- accumulators for continuous operation
 - lifting equipment

RANGE STATEMENT

- Production process**
- see laminating board
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Pre start-up checks**
- are conducted to ensure:
- machine has been set-up correctly
 - systems are performing accurately
 - machinery is operating to optimum performance
- Pressing**
- is the process of compressing the treated material to the board after adhesion between large heated plates
- Transferral** may include:
- the use of:
- conveyor belt systems
 - track systems
 - lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
 - assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- Records and reports** may include:
- product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations

RANGE STATEMENT

- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Shutdown is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- cleaning and maintaining all parts

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3211B Maintain caul plates and screens

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to clean, inspect and replace caul plates and screens in laminating and pressing equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3211A Maintain caul plates and screens

Application of the Unit

Application of the unit

The unit involves maintaining caul plates and screens in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for maintenance	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to maintaining <i>caul plates</i> and screens are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Caul plates and <i>screens</i> to be <i>maintained</i> are removed from the designated machinery</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Maintenance process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Change, clean and polish caul plates	<p>2.1. Plates requiring cleaning are identified and removed from <i>circuit</i> to <i>plate rack</i> in line with operating procedures</p> <p>2.2. Plates are processed through full <i>cleaning cycle</i></p>

ELEMENT	PERFORMANCE CRITERIA
	2.3. Plates are inspected and those with <i>defects</i> separated for repairs
	2.4. Plates are dried and prepared for use and returned to circuit in line with standard operating procedures
	2.5. Plates are <i>polished</i> using polishing table and head in line with operating procedures
	2.6. Polished plates are stored for use in line with organisational requirements
	2.7. Chemicals are stored and disposed of in line with statutory requirements and environmental regulations
3. Prepare backing screens	3.1. Screens are rolled from plate and secured in line with standard operating procedures
	3.2. Screens are processed through full cleaning cycle
	3.3. Screens are stacked and inspected for faults
	3.4. Defective screens are identified, removed and <i>disposed of</i> in line with site procedures and environmental requirements
4. Remove and replace transport plates	4.1. <i>Load shifting</i> and transport requirements are coordinated to remove and replace <i>transport plates</i> with minimal downtime
	4.2. Defective plates are identified, removed from circuit and disposed of in line with site procedures and environmental requirements
	4.3. Replacement plates are prepared and fitted in line with standard operating procedures
	4.4. Maintenance process and equipment faults are <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely maintain caul plates and screens
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for maintaining caul plates and screens
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for maintaining caul plates and screens
- Environmental risks and hazards
- Characteristics of metal, caul plates and screens
- Caul plate and screen maintenance procedures
- Removal and replacement methods
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently maintain caul plates and screens within

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>organisational requirements</p> <p>The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to maintaining caul plates and screens • following organisational policies and procedures relevant to maintaining caul plates and screens • maintaining caul plates and screens in line with the work order and within prescribed organisational requirements • removing and replacing caul plates and screens from equipment
Context of and specific resources for assessment	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills • Assessment methods must confirm the ability to access and correctly interpret and apply the required

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knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control

RANGE STATEMENT

- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

Caul plates

are double sided smooth plates used in the drying and heat pressing of board in the semi-wet or dry board forming process (the smoothness allows for easier separation)

Work order is to include:

- instructions for the maintenance of the caul plates and screens in designated equipment

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Screens

are plates which allow for drainage of water as the board forming process takes it through rollers prior to going through the heat press

Maintenance

is the process of cleaning and repairing caul plates and screens which undergo considerable stress from pressure, heat and sticky substances

Equipment may include:

- caul plates
- screens
- transport plates
- cleaning equipment

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to

RANGE STATEMENT

- individual social and cultural differences
 - control of tone of voice
 - body language
- Circuit** is the board forming process from start to finish
- Plate rack** is the racking system which caul plates and screens sit upon
- Cleaning cycle** may include:
- chemical baths
 - heat treatment baths
- Defects** may include:
- buckling
 - build up of board product
 - marking of the plates
 - dents
- Polishing** ensures both surfaces of caul plates are smooth and polished to ensure easy separation of formed boards
- Disposing of** may include:
- recycling defective material
 - re-using defective material
- Load shifting** may include: the use of:
- conveyor belt systems
 - track systems
 - lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
 - assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- Transport plates** are the plates which carry caul plates and screens through the drying process and heat press
- Records and reports** may include:
- the knife or blade type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations

RANGE STATEMENT

- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3212B Dry material

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to dry a range of materials in a continuous operating single or multi pass drier or flash drier using either steam, heated air or gas to dry the material

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3212A Dry material

Application of the Unit

Application of the unit The unit involves drying material in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for drying	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to drying material are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be <i>dried</i> is assessed and acquired from the production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Drying process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Dry material	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Furnace</i> is lit and continually monitored in line with operational procedures and environmental</p>

ELEMENT	PERFORMANCE CRITERIA
	regulations
	2.3. Emergency shutdown procedures are followed in response to a fire
	2.4. Drying temperature, humidity and feed rate are set for optimal recovery of product
	2.5. Material is positioned and fed at rate appropriate to the machine speed, capacity, treatment being dried, thickness and condition
	2.6. Material is visually assessed and moisture levels measured to ensure specified outcome has been achieved
	2.7. Out-feed is coordinated to ensure efficient recovery of dried material
	2.8. Drying process and equipment faults are recorded and reported to the appropriate personnel
3. Redistribute material	3.1. Material is regraded in line with site requirements and industry standards
	3.2. Material is directed and moved to storage or processing operations in line with site requirements
	3.3. Sub-standard material is rejected and disposed of in line with site requirements and environmental requirements
	3.4. Work area is cleaned in line with site requirements
4. Conduct operator maintenance	4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	4.2. Drying mechanisms are checked for effective condition in line with site procedures
	4.3. Oil levels, air filters, conveyors and chains are checked, replenished or maintained in line with organisational requirements
	4.4. Machine area is kept clear of dust, shavings and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely dry material
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Basic knowledge and understanding of applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for dry material
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for drying material
- Environmental risks and hazards
- Drying techniques
- Procedures for operating continuous operating single pass or multi pass driers or flash driers
- Methods for checking moisture content
- Methods of visual assessment
- Characteristics of timber and veneer
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently dry material in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to drying material
- following organisational policies and procedures relevant to drying material
- drying material in readiness for storage and/or processing
- redistributing material on site using designated equipment
- conducting operator maintenance on drying equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and

RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- instructions for the drying of material

Work order is to include:

and may include:

- species
- colour
- type
- width
- length
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Material may include:

- solid timber
- flake
- veneer
- raw boards
- laminated panels
- veneered panels
- plywood

Drying may include:

- pre-dryers
- dryers
- cooling sections
- steam
- heated air
- gas

Equipment may include:

- continuous operating single pass or multi pass driers

RANGE STATEMENT

- flash driers
- furnaces and ancillary equipment such as continuous conveyor
- pre-driers
- cooling sections

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machinery has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

Furnace

is the source of providing heat to the drying system, often using oil

Emergency shutdown

is the immediate shutting off of equipment to prevent an accident or prevent damage to the machine or product

Feed rate is to include:

- the rate of speed the material is passed through the drying equipment
- the impact on equipment
- the finish
- the production output

Visually assessed

is the assessment of materials to determine finish quality and faults

RANGE STATEMENT

Moisture level

- is the amount of moisture maintained in timber or timber products after drying to avoid cracking and deforming
- in Australia generally ranges between 10% in warmer, more humid climates to 14% in cooler climates

Out-feed is to include:

- the material exiting from the drying operation and handled to prevent further damage to the surfaces or edges

Records and reports may include:

- drying requirements
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manually
- using a computer-based system or other appropriate organisational communication system

Regrading

is the process of visually inspecting material to re-classify quality and use after drying has taken place

Movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment

lifting equipment such as:

- fork lifts
- slings
- trolley jacks
- gantry cranes
- loaders

assistance with lifting such as:

- the involvement of two or more personnel to

RANGE STATEMENT

lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3213B Heat treat material

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to heat treat material in both standard and controlled humidity ovens to achieve the desired moisture content and curing

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3213A Heat treat material

Application of the Unit

Application of the unit The unit involves heat treating material in a forest products factory

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------------|---|
| 1. Prepare for heat treating | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to heat treating material are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>material</i> to be <i>heat treated</i> is assessed and acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Heat treating process <i>cycles</i> are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Dry material | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Oven</i> settings are adjusted to suit process cycles and material condition and continually monitored in line with operational procedures</p> |

ELEMENT	PERFORMANCE CRITERIA
	2.3. <i>Emergency shutdown</i> procedures are followed in response to oven alarm
	2.4. Heating temperature and humidity are set for optimal recovery of product
	2.5. <i>Racks</i> containing materials of consistent processing condition and allowable range of thickness are prepared and loaded into the oven, maximising space
	2.6. Material is <i>visually assessed</i> and <i>moisture levels</i> measured to ensure specified outcome has been achieved
	2.7. Processed racks are tagged or marked and material samples taken for <i>testing</i> in line with site requirements
	2.8. Heat treating process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Redistribute material	3.1. Material is <i>regraded</i> in line with site requirements and industry standards
	3.2. Material is directed and <i>moved</i> to storage or processing operations in line with site requirements
	3.3. Sub-standard material is rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	3.4. Work area is cleaned in line with OHS requirements
4. Conduct operator maintenance	4.1. Oven shut-down procedures are followed in line with OHS legislation and site procedures
	4.2. Heat treating mechanisms are checked for effective condition in line with site procedures
	4.3. Temperature and humidity settings, water drainage, atomising sprays and fans are checked, adjusted or maintained
	4.4. Oven area is kept clear of dust, shavings and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely heat treat material
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for heat treating material
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for heat treating material
- Environmental risks and hazards
- Heat treating techniques
- Methods of visual inspection
- Characteristics of material
- Oven temperatures and humidity
- Distribution processes
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently heat treat material in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to heat treating material
- following organisational policies and procedures relevant to heat treating material
- heat treating material in readiness for storage and/or processing
- redistributing material on site using designated equipment
- conducting operator maintenance on oven and racking equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and

RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the heat treating of material
- and may include:
- colour
 - type
 - width
 - length
 - thickness
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Material** may include:
- logs
 - raw boards
 - laminated panels
 - coves
 - board
 - medium density fibreboard
 - plywood
- Heat treating** is the process of curing newly formed materials or board to the desired level of moisture content, weight, thickness and density
- Storage locations** may include: the use of:
- storage racks
 - storage bays
 - bins
 - stacks

RANGE STATEMENT

- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position
- standard or controlled humidity type ovens including:
 - temperature and humidity settings
 - water drainage
 - atomising sprays
 - fans

Equipment may include:

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Cycles

are the heat treating time materials spend in the oven based on condition of the materials and thickness

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

RANGE STATEMENT

Pre start-up checks

are conducted to ensure:

- oven and rack systems have been set-up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Oven

is the source of providing heat to the materials on the drying racks in an isolated and controlled setting with heat and humidity set accordingly

Emergency shutdown

is the immediate shutting off of the equipment to prevent an accident or prevent damage to the machine or product

Racks

- are the systems on which the enterprise has chosen to treat the materials
- are usually a tiered system for the materials to lie on while being treated ensuring stability and reasonable spacing to prevent warping
- can be motorised, wheeled or lifted into position

Visually assessed

is the assessment of materials to determine finish quality and faults

Moisture level

- is the amount of moisture maintained in timber or timber products after drying to avoid cracking and deforming
- in Australia generally ranges between 10% in warmer, more humid climates to 14% in cooler climates

Testing

- is the process of measuring:
 - moisture content
 - weight
 - thickness and density to achieve the desired outcome for all of these
- ensures accurate heat treating
- allows for adjustment of the cycles accordingly

Records and reports may include:

- heat treating requirements
- product type
- size
- inspection

RANGE STATEMENT

- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system
- another appropriate organisational communication system

Regrading

is the process of visually inspecting material to re-classify quality and use after treating has taken effect

Movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3214B Treat paper

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to treat paper with resin in readiness for use in the laminating process

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3214A Treat paper

Application of the Unit

Application of the unit

The unit involves treating paper in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|--|
| 1. Prepare for treating | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to treat paper are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>paper</i> to be <i>treated</i> is assessed and acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Treating processes are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Load and treat paper | <p>2.1. Paper rolls are located and moved to loader</p> <p>2.2. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.3. Paper is threaded and feed commenced and monitored in line with operating procedures and minimal damage to paper</p> <p>2.4. Rolls are changed at depletion and in conjunction</p> |

ELEMENT**PERFORMANCE CRITERIA**

- with treatment requirements
- 2.5. **Treater** is brought to full operating condition and operating parameters regularly checked in line with site requirements
- 2.6. Treating line is run and paper treated with foreign material monitored and kept clear of treating process
- 2.7. **Resin** parameters are regularly checked and adjusted in line with operating procedures
- 2.8. Paper is regularly **assessed** to ensure specified outcomes have been achieved
- 2.9. Paper treating process and equipment faults are **recorded and reported** to the appropriate personnel
3. Fill resin tank
- 3.1. Resin feed from tanks is shut off in line with operating procedures
- 3.2. **Resin tanks** are thoroughly washed and drained following operating procedures
- 3.3. Resin being pumped from the delivery truck to the tank is monitored to ensure successful transfer and documentation is completed
- 3.4. Area surrounding tank is washed clear of any spillage in line with statutory requirements and environmental regulations
4. Operate effluent system
- 4.1. **Effluent tanks** are monitored and regularly cleaned in line with site requirements
- 4.2. **Settling agents** are added to effluent tanks to enterprise specified quantities and allowed to settle
- 4.3. **Solids** are removed and disposed of in line with statutory requirements and environmental regulations
5. Conduct operator maintenance
- 5.1. Treater shut-down procedures are followed in line with OHS legislation and site procedures
- 5.2. Treating mechanisms are checked for effective condition in line with site procedures
- 5.3. **Vat and oven** temperatures are checked, adjusted or maintained
- 5.4. Excess resin is disposed of in line with statutory requirements and environmental regulations
- 5.5. Treating area is kept clear of dust, shavings and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely treat paper
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for treating paper
- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for treating paper
- Environmental risks and hazards
- Paper treating techniques
- Methods of visual inspection
- Characteristics of paper and resin
- Oven and vat temperatures
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently treat paper in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to treating paper
- following organisational policies and procedures relevant to treating paper
- treating paper in readiness for storage and/or processing
- conducting operator maintenance on oven and racking equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE

application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

RANGE STATEMENT

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage

RANGE STATEMENT

- Work order** is to include:
- requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - instructions for the paper treating
- and may include:
- treating method
 - colour
 - type
 - width
 - length
 - thickness
 - quantity
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Paper** is to include:
- paper provided in roll form
 - types or thicknesses that are in line with customer usage requirements
- and may include:
- parameters such as dry width
 - expansion ratio
 - contamination levels
 - resin weight
- Treating** is the process of impregnating paper with a durable resin
- Storage locations** may include: the use of:
- storage racks
 - storage bays
 - bins
 - stacks

RANGE STATEMENT

- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- treaters
- vats
- ovens
- resin tanks
- effluent tanks

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- oven and rack systems have been set-up correctly
- systems are performing accurately
- equipment is operating to optimum

RANGE STATEMENT

	performance
Treater	is the source of providing heat and resin to the paper in a controlled setting with the heat set accordingly
Resin	<ul style="list-style-type: none">• is a powder or liquid form of organic compound made by polymerisation• is used to plasticise paper, hardening and making it durable
Assessed is to include:	<ul style="list-style-type: none">• finish quality• faults
Records and reports may include:	<ul style="list-style-type: none">• treating requirements• product type• size• inspection• grading and labelling outcomes• storage locations• quality outcomes• hazards• incidents• equipment malfunctions and may be: <ul style="list-style-type: none">• manually• using a computer-based system or other appropriate organisational communication system
Resin tanks	are tanks which hold, heat and transfer resin to the treating process
Effluent tanks	are the tanks which accept the run off return from the treating process which contain many foreign particles and solids
Settling agents	are flocking products which capture foreign particles and solids floating weightlessly within the effluent tank and settle them to the bottom of the tank for easy removal
Solids	are the result of using settling agents to solidify foreign particles in the effluent tank for easy removal

RANGE STATEMENT

Vat and oven see treater

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3215B Cut paper

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to cut paper to width and length, free of defects in readiness for lamination processes

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3215A Cut paper

Application of the Unit

Application of the unit The unit involves cutting paper in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------|---|
| 1. Prepare for cutting | <ul style="list-style-type: none"> 1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to <i>cutting paper</i> are identified and followed 1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i> 1.3. Type and quantity of paper to be cut is acquired from the veneer production process 1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations 1.5. Cutting process is selected and planned in line with site procedures 1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements |
| 2. Cut paper | <ul style="list-style-type: none"> 2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements 2.2. <i>Conveyor</i> and <i>guillotine</i> operation is coordinated with veneer production 2.3. Optimal cutting positions are selected to minimise |

ELEMENT	PERFORMANCE CRITERIA
	<i>defects</i> and maximise full width sheets
	2.4. Cutting is conducted and <i>feed rate</i> monitored in line with operational procedures
	2.5. Conveyors are regularly monitored for material flow problems
	2.6. Paper is <i>visually assessed</i> through the cutting process
	2.7. Cutting process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Redistribute material	3.1. Paper is directed and <i>moved to storage</i> or processing operations in line with site requirements
	3.2. Sub-standard and defective paper is rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	3.3. Work area is cleaned in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely cut paper
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for cutting paper

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for cutting paper
- Environmental risks and hazards
- Paper cutting techniques
- Methods of visual inspection
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently cut paper in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to cutting paper
- following organisational policies and procedures relevant to cutting paper

EVIDENCE GUIDE

Context of and specific resources for assessment

- cutting paper in readiness for application to panel products or for interim storage
- redistributing paper on site using designated equipment
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations,

RANGE STATEMENT

certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Cutting is to include:

- the process of visually inspecting paper to determine cuts
- optimising sheet sizes using power driven guillotines or traversing rotary cutters

Paper is to include:

- resin impregnated paper provided in roll form
- types or thicknesses that are in line with customer usage requirements

and may include:

- parameters such as dry width
- expansion ratio
- contamination levels
- resin weight

RANGE STATEMENT

Work order is to include:

- instructions for the cutting of paper

and may include:

- colour
- type
- width
- length
- thickness
- quantity
- cutting method
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Equipment may include:

- electronic guillotines
- conveyor belt systems
- traversing rotary cutters

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly

RANGE STATEMENT

- systems are performing accurately
 - machinery is operating to optimum performance
- Conveyor** is to include:
- belts or travelator methods of transporting paper to and from the guillotine, which may be automated in conjunction with the paper treating production process
- Guillotine** is the piece of electronic equipment used to cut paper, which can be computer programmed
- Defects** may include:
- incorrect moisture content
 - paper making defects
 - resin impregnating defects
- Feed rate** is to include:
- the rate of speed the paper is passed through the guillotine
 - the impact on equipment
 - the finish of the cut
 - the production output
- Visually assessed** is to include:
- strength
 - defects
 - other paper faults
- Records and reports** may include:
- product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system
- Movement of material** may include:
- the use of:
- conveyor belt systems
 - track systems
 - lifting equipment such as:
 - fork lifts

RANGE STATEMENT

- slings
- trolley jacks
- gantry cranes
- loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Disposing of may include:

- recycling sub-standard and defective paper
- re-using sub-standard and defective paper

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3216B Press material using the daylight process

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to set-up, operate and shut-down the press and ancillary equipment used to press material using the daylight process

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3216A Press material using the daylight process

Application of the Unit

Application of the unit The unit involves pressing material using the daylight process in a forest products setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for pressing	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to pressing <i>material</i> using the <i>daylight process</i> are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of material to be pressed is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Pressing</i> process is selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Press material	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Press <i>cycle</i> times, pressures, temperatures and product parameters are set and adjusted for</p>

ELEMENT**PERFORMANCE CRITERIA**

- production requirements
- 2.3. Material is pressed while monitoring and adjusting material position, *feed rate*, mat condition and press condition
- 2.4. Unload and reload cycles are performed in line with site procedures
- 2.5. Pressed material and thickness changes are regularly assessed and necessary changes to *former*, press set-up and *blending* requirements made
- 2.6. Pressed material production is regularly checked to ensure it conforms with size and organisational requirements
- 2.7. Pressing process and equipment faults are *recorded and reported* to the appropriate personnel
3. Unload material
- 3.1. Press is opened in line with operating procedures
- 3.2. Material and *forming equipment* are separated and removed from press using unloading equipment
- 3.3. Material is loaded into the *cooling receiver*, trimmed, checked and unloaded
- 3.4. Material samples are *tested* to confirm that they follow industry standard and to check for *defects*
- 3.5. Material with defects is rejected and *disposed of* in line with site procedures and environmental requirements
- 3.6. Finished material is *transferred* for further processing in line with site requirements
4. Shut down and clean equipment
- 4.1. *Shutdown* procedures are coordinated with designated stop time and other line operators, and followed in line with OHS legislation and site procedures
- 4.2. Blending equipment, press and handling equipment are stripped and cleaned in line with site operating procedures
- 4.3. Press bars or stops, plates and screens are checked and cleaned
- 4.4. Machine area is kept clear of foreign material, dust and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely press material
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for pressing material using the daylight process
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for pressing material using the daylight process
- Environmental risks and hazards
- Material pressing processes
- Chip, flake and fibre characteristics
- Blending methods
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently press material using the daylight process in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to pressing material using the daylight process
- following organisational policies and procedures relevant to pressing material using the daylight process
- pressing material in readiness for storage and/or processing
- operating blending and daylight press equipment to bond and produce pressed material
- redistributing material on site using designated equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

RANGE STATEMENT

- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Material may include:

- medium density fibreboard
- chipboard
- fibreboard
- other manufactured board products
- panels
- veneered panels
- chips (which are an output of breaking down logs into wood chips approximately the size of a 50 cent coin and then breaking these down to form smaller chips for chipboard production)
- fibre (which is the output product as a result of smashing wood chips into fibrous material which is then used to produce medium density fibreboard)
- flakes (which are the output product as a result of converting wood chips into a thinner chip material which is then used to produce panel products)

Daylight process may include:

- multi-daylight press operations

Work order is to include:

- instructions for the receipt/despatch and pressing of material to/from the designated storage location or processing

and may include:

- texture
- colour
- type
- size
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures

RANGE STATEMENT

- Appropriate personnel** may include:
- environmental care requirements relevant to the work
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Storage location** may include: the use of:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** is to include:
- daylight process presses, which are driven by steam pressure and include:
 - electric
 - pneumatic or hydraulic loading and unloading equipment
 - pre-presses
 - formers
 - forming equipment
 - press bars or stops
 - cooling receivers
 - blending equipment
 - trimming equipment
- Pressing**
- is the process of compressing material using

RANGE STATEMENT

formers and a heat driven press system

and includes consideration of:

- weight
- thickness
- length
- width
- bond
- porosity
- moisture content
- bare fibres
- foreign material
- visual appearance
- surface blemishes
- trimmed edge appearance

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

Cycle

- is the process of forming material and pressing it until it is ready for cooling
- unloading the press and restarting the process commences another cycle
- process includes time, pressure and temperature considerations

Feed rate

is the rate of speed at which the blended material is pumped into the former

Former

is the piece of equipment which shapes the molten

RANGE STATEMENT

chips, flakes or fibre into sheet form

Blending

is the mixing of the chips, flakes or fibre with the binding ingredients and hardening agents

Records and reports may include:

- material type
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Forming equipment is to include:

- mats
- screens
- trays
- plates

Cooling receiver

is the equipment and process used to cool the newly set and pressed material

Testing

- is the process of measuring moisture content, weight, thickness and density of the panels to achieve the desired outcome for all of these
- ensures accurate forming and cycle times
- allows for adjustment of the cycles accordingly

Defects may include:

- surface blemishes
- discolouration
- natural timber defects
- forming deformities

Disposing of may include:

- recycling material with defects
- re-using material with defects

Transferral may include:

the use of:

- conveyor belt systems

RANGE STATEMENT

- track systems
 - lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
 - assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- Shutdown** is to include:
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
 - cleaning and maintaining all parts

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3217B Process production effluent

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to prepare and maintain the production effluent and distribute the waste to water

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3217A Control production effluent

Application of the Unit

Application of the unit The unit involves processing production effluent in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare effluent plant	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to processing production effluent are identified and followed</p> <p>1.2. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.3. <i>Pumping lines</i> are set-up and checked in line with site requirements</p> <p>1.4. <i>Treatment solution</i> is pumped from the mixing tank to effluent line settling pits and clarifier</p> <p>1.5. <i>Sludge</i> is run from <i>clarifier</i> and water drained from sludge beds in line with organisational procedures and environmental regulations</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Distribute water to pasture	<p>2.1. Water is pumped to <i>pasture</i> area in line with environmental regulations</p> <p>2.2. <i>Flow rate</i> is set, monitored and adjusted to suit</p>

ELEMENT	PERFORMANCE CRITERIA
3. Conduct operator maintenance	<p>required absorption rate</p> <p>2.3. <i>pH level</i> is checked, monitored and adjusted in line with environmental regulations</p> <p>2.4. Effluent processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p> <p>3.1. Effluent plant shut-down procedures are followed in line with OHS legislation and site procedures</p> <p>3.2. <i>Settling pits</i> are drained and cleaned to collection point</p> <p>3.3. <i>Solids</i> are cleaned from discharge drain and disposed of in line with site procedures and environmental regulations</p> <p>3.4. Water is recirculated from catchment area to irrigation</p> <p>3.5. Dam banks are monitored for weed and vermin</p> <p>3.6. Effluent plant area is kept clear of foreign bodies and debris in line with OHS requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely process effluent
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for processing production effluent

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for processing production effluent
- Environmental risks and hazards
- Effluent processing techniques
- Effluent treatment
- Effluent discharge environmental regulations
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently process production effluent in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to processing production effluent
- following organisational policies and procedures relevant to processing production effluent

EVIDENCE GUIDE

- processing production effluent and discharge it to pasture
 - conducting operator maintenance on effluent treating equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
 - Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate

EVIDENCE GUIDE

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements

may include:

Legislative requirements:

are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Equipment may include:

- pumping lines
- mixing tanks
- effluent line settling pits
- clarifiers
- sludge beds

and is to include:

- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Pumping lines

disperse processed effluent from the treating system to pasture and between treating system

RANGE STATEMENT

	components
Treatment solution	are flocking products or settling agents which capture foreign particles and solids floating weightlessly within the settling pit and sink these to the bottom and the discharge pipes for easy removal
Sludge	is a tanked area where treated effluent is further treated to gain clarity, processing it in readiness for discharge to pasture
Clarifier	process clears the effluent removing cloudiness and subsequent foreign particles
Communication may include:	<ul style="list-style-type: none">• verbal and non-verbal language• constructive feedback• active listening• questioning to clarify and confirm understanding• use of positive, confident and cooperative language• use of language and concepts appropriate to individual social and cultural differences• control of tone of voice• body language
Pasture	is the surrounding rural fields where processed effluent is discharged as a method of irrigation
Flow rate	is the speed at which processed effluent is discharged
pH level	measures acidity or alkalinity in the processed effluent to achieve the acceptable level to suit the environment it is being pumped to
Records and reports may include:	<ul style="list-style-type: none">• processing and treating requirements• storage locations• quality outcomes• hazards• incidents• equipment malfunctions and may be: <ul style="list-style-type: none">• manual

RANGE STATEMENT

- using a computer-based system or another appropriate organisational communication system

Settling pits

are the catchments which accept the run off return from the treating process which contain many foreign particles and solids

Solids

are the result of using settling agents to solidify foreign particles in the effluent tank or settling pits for easy removal

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3218B Plan and coordinate machining of panels

Modification History

FPI05 changed to FPI11 in Method of assessment

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan the production of panels and cutting patterns, coordinate cutting processes and monitor equipment and output

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3218A Plan and coordinate machining of panels

Application of the Unit

Application of the unit

The unit involves planning and coordinating machining of panels in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan machining operations	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planning and coordinating machining of panels are identified and followed</p> <p>1.2. Variations in panel characteristics are assessed, recorded and reported to <i>operators</i></p> <p>1.3. <i>Panel machining</i> schedules are produced and applied in line with site procedures</p> <p>1.4. <i>Panel type</i> and sizes including order information are planned, scheduled and communicated to operators</p> <p>1.5. <i>Cutting patterns</i> are planned and prescribed</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Monitor panel machining performance	<p>2.1. Standard cutting patterns are reviewed for suitability to planned cutting schedules</p> <p>2.2. Panel cutting processes are monitored for effectiveness of cutting pattern and condition of panel</p> <p>2.3. Assistance is provided to operators with the</p>

ELEMENT**PERFORMANCE CRITERIA**

- evaluation of panels and machining problems
- 2.4. Panel management and *output* are monitored to record possible process improvements
- 2.5. Panel machining, major problems and equipment faults are investigated, *recorded and reported* in line with site requirements
3. Coordinate panel cutting
- 3.1. Cutting operations and output are monitored to record and action possible process improvements based on cutting patterns and panels being processed
- 3.2. Modifications are made to cutting patterns or schedules to ensure optimum performance and communicated to operators
- 3.3. Cutting improvement modifications are documented and communicated in line with site procedures
- 3.4. Cutting output details are obtained and recorded in line with site requirements
- 3.5. Machined panels are directed to *storage* or *transferred* for further processing
- 3.6. Processes for rejecting and *disposing of* unsuitable machined panels and off-cuts are followed in line with site procedures and environmental requirements
- 3.7. Operating logs and cutting records are completed and maintained to site standards

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; accurately record and report workplace information, and maintain documentation; efficiently and safely plan and coordinate panel machining operations
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to

REQUIRED SKILLS AND KNOWLEDGE

complete a task

- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and coordinating machining of panels
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and coordinating machining of panels
- Environmental risks and hazards
- Typical routine problems encountered in the process and with equipment and adjustments required for correction
- Types of tools and equipment and procedures for their use, operation and maintenance
- Panel selection procedures and management
- Cutting pattern methodologies
- Cutting sequences
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and coordinate panel machining

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>operations in line with organisational requirements</p> <p>The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:</p> <ul style="list-style-type: none"> • following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to planning and coordinating machining of panels • following organisational policies and procedures relevant to planning and coordinating machining of panels • planning and coordinating panel machining operations for the enterprise • modifying cutting patterns and schedules for panel machining within the enterprise • coordinating personnel to follow planning, communications and scheduling for panel machining
Context of and specific resources for assessment	<ul style="list-style-type: none"> • Competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to follow relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to undertaking work applicable to this unit • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge • Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills

EVIDENCE GUIDE

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment

RANGE STATEMENT

- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Operators

are the personnel who use the machines to cut, shape or profile panels to size, shape or profile

RANGE STATEMENT

Panel machining is the process of cutting panels to size, shape or profile

Panel types may include:

- laminated
- veneered
- plywood
- chipboard
- fibreboard
- medium density fibreboard

with a range of:

- sizes
- surface treatments
- edge treatments
- thicknesses
- grades

Cutting patterns are to include:

- ways in which the panel is cut, shaped or profiled to achieve the output results planned for that panel

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Output is to include:

- size
- volume recovery
- finish
- dimensional consistency
- quality of panels produced

Records and reports may include:

- planning and monitoring outcomes
- operating logs
- cutting records
- material movement
- despatch outcomes
- storage locations

RANGE STATEMENT

- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Storage may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Transferral may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the

RANGE STATEMENT

- Disposing of** may include:
- movement of mechanical equipment
 - recycling unsuitable machined panels and off-cuts
 - re-using unsuitable machined panels and off-cuts

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3219B Blend and test binding mixes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to blend and test binding mixes for use in the forming of chip, flake and fibre boards

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3219A Blend and test binding mixes

Application of the Unit

Application of the unit The unit involves blending and testing binding mixes in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for blending	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to blending and testing binding mixes are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of ingredients to form the <i>binding mix</i> to be blended is acquired from <i>storage</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Blending process is selected and planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Blend and test binding mix	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Blend cycles are set in line with organisational requirements</p>

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|---------------------------------|---|
| 3. Maintain and clean equipment | <p>2.3. <i>Ingredients</i> and <i>additives</i> are measured and blended ensuring minimum wastage in line with site and environmental requirements</p> <p>2.4. Blend is transferred to appropriate storage location or production equipment without contamination through <i>transfer lines</i></p> <p>2.5. Addition rate of additives are monitored and pumps adjusted</p> <p>2.6. Samples of blend are regularly taken for <i>testing</i> to check tack and adhesion properties in line with standard operating procedures</p> <p>2.7. Test results are interpreted and adjustments made to achieve desired properties</p> <p>2.8. Sub-standard blend is rejected and disposed of in line with site procedures and environmental regulations</p> <p>2.9. Blending process and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p> <p>3.1. Blending, storage and transfer equipment is cleaned to organisation requirements</p> <p>3.2. Pumps are turned off and equipment flushed in line with organisational standard operating procedures</p> <p>3.3. Excess blended material and additives are disposed of in line with statutory requirements</p> <p>3.4. Equipment and ingredients are stored in line with statutory requirements</p> |
|---------------------------------|---|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely blend and test binding mixes
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation

REQUIRED SKILLS AND KNOWLEDGE

- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for blending and testing binding mixes
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for blending and testing binding mixes
- Environmental risks and hazards
- Blending techniques and ingredients
- Characteristics of ingredients and additives
- Weather conditions affecting blending conditions
- Blending operations and maintenance procedures
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and

EVIDENCE GUIDE

efficiently blend and test binding mixes within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to blending and testing binding mixes
- following organisational policies and procedures relevant to blending and testing binding mixes
- blending and testing binding mixes in line with the work order and within prescribed organisational requirements
- conducting blending operations and maintenance procedures
- storing batches of binding mix in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must

EVIDENCE GUIDE

- also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
 - Where the participant has a disability, reasonable adjustment may be applied during assessment
 - Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment

RANGE STATEMENT

- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements

RANGE STATEMENT

(waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the blending of binding mixes

and may include:

- type
- quantity
- setting rate
- mixing percentages
- additives
- hardness
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Binding mix may include:

- chips
- flakes
- fibre
- glue
- additives
- other enterprise specified ingredients

Storage locations may include:

- drums kept in flammable goods storage areas
- plastic tubs kept in flammable goods storage areas

Equipment may include:

- blenders with manually controlled feed
- mixers with pre-programmed mix quantities
- cycles
- transfer pumps
- valves

Blending:

- usually includes mixing a base ingredient with a hardener to aid setting plus any specified additives to specified quantities
- can occur manually or mechanically

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening

RANGE STATEMENT

- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately
- equipment is operating to optimum performance

Ingredients may include:

synthetic or animal based adhesives such as:

- casein
- rubber based adhesives
- poly vinyl acetate
- epoxy resins and formaldehydes
- chips
- flakes or fibre
- hardeners
- softeners
- accelerants
- decelerators
- dyes

Additives may include:

agents which:

- harden
- soften
- accelerate or decelerate glue or resin setting

Transfer lines may include:

- transfer of ingredients to the blenders
- transfer of the binding mix to storage or production

Testing is to include:

regular sampling of the blending mix to check:

- mix quantities
- ingredient characteristics
- viscosity
- colour
- spread

RANGE STATEMENT

- tack
- cured bond strength
- setting speed (is it going off)
- how weather conditions may be affecting the process

- Records and reports** may include:
- binding and testing results
 - quantities produced
 - condition changes
 - production difficulties
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3220B Plan and coordinate panel painting

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to plan panel painting activities and coordinate the roller coating, curtain coating and spray painting lines

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3220A Plan and coordinate panel painting

Application of the Unit

Application of the unit The unit involves planning and coordinating panel painting in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan painting procedures	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planning and coordinating panel painting are identified and followed</p> <p>1.2. Variations in <i>paint mixtures</i> are monitored, assessed and adjusted</p> <p>1.3. <i>Painting</i> schedules are produced and applied in line with site procedures</p> <p>1.4. <i>Equipment</i> procedures, settings and operation are planned and scheduled</p> <p>1.5. <i>Waste minimisation</i> and control measures are planned and prescribed</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Coordinate painting activities	<p>2.1. <i>Work orders</i> are checked and interpreted to ensure accuracy</p> <p>2.2. <i>Operators</i> are directed to load and unload painting equipment</p> <p>2.3. <i>Paint line</i> performance is checked and data</p>

ELEMENT**PERFORMANCE CRITERIA**

- interpreted to ensure accuracy and intended coverage
- 2.4. Paint application procedures and curing processes are coordinated and monitored for quality finish and completion rates
 - 2.5. Painting operations and output are monitored to record possible process improvements and to ensure maximum cost effectiveness
 - 2.6. Painting operations, major problems and equipment faults are investigated, *recorded and reported* in line with site requirements
 - 2.7. Processes for disposing of excess paint that cannot be stored are followed in line with site procedures and environmental regulations
 - 2.8. Processes for cleaning painting equipment are followed in line with site procedures and environmental regulations
3. Modify operations and assess technical developments
 - 3.1. Modifications are made to schedules to ensure optimum performance
 - 3.2. Painting process improvement modifications are documented and communicated in line with site procedures
 - 3.3. Developments in painting processes and related technology are diagnosed for possible improvements
 - 3.4. *Technical developments* are analysed and assessed for potential incorporation into existing painting procedures
 - 3.5. Proposed developments are authorised, trialled, documented and introduced into site operations

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely plan and coordinate panel painting
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace

REQUIRED SKILLS AND KNOWLEDGE

- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and coordinating panel painting
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and coordinating panel painting
- Environmental risks and hazards
- Painting operation procedures
- Paint line management and operation
- Waste minimisation control measures
- Painting modification strategies
- Technical development diagnosis and solution methodologies
- Established communication channels and protocols
- Principles of cultural diversity and access and equity
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and coordinate panel painting in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to planning and coordinating panel painting
- following organisational policies and procedures relevant to planning and coordinating panel painting
- modifying painting operations for the enterprise
- coordinating personnel to follow planning, communications and scheduling for panel painting

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to

EVIDENCE GUIDE

access and correctly interpret and apply the required knowledge

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment

RANGE STATEMENT

- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

RANGE STATEMENT

Paint mixtures are to include:

- water based paints

and may include:

- oil based or solvent based paints with additives to accelerate or slow drying times

Painting is to include:

- the application of paint to coat wood panel products for customer orders

and may include:

- application of paint coats ensuring viscosity
- film thickness
- film wetness
- rate of application to ensure surface integrity

Equipment may include:

- roller coating lines
- spray booths
- curtain coating lines
- trays
- overflow trays
- thinner reservoirs
- spray guns
- roller coaters

Waste minimisation may include:

- measures to control paint and additive waste
- other foreign matter

Communication may include:

- schedules
- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Work order is to include:

- instructions for the painting of timber panel products

and may include:

- type
- size
- length

RANGE STATEMENT

- thickness
- quantity
- grade:
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Operators

are personnel who operate the roller coaters, curtain coaters or spray equipment

Paint line

is the automated, mechanised or manual systems of moving products past painting stations from the preparation area, through preparation coating, rub downs, final coating and curing

Records and reports may include:

- planning and monitoring outcomes
- data sheets
- material movement
- despatch outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Technical developments may include:

unforeseen problems related to:

- plant
- equipment
- paints
- panels

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3221B Trim new panels to size

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to trim panels to size in the production process with automated trimming saws. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3221A Trim new panels to size

Application of the Unit

Application of the unit The unit involves trimming new panels to size in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for trimming	<p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to trimming new panels to size are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>panels</i> to be <i>trimmed</i> is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Material <i>trimming sequences</i> are planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Trim panels to size	<p>2.1. <i>Feed system</i> is set to stop material automatically for trimming to occur</p> <p>2.2. Monitoring of the trimming sequence is continued until the new <i>panel production run</i> ceases</p> <p>2.3. Cuts are checked for length within a set <i>tolerance</i></p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Material with <i>defects</i> , incorrect cuts and off-cuts is <i>disposed of</i> in line with site procedures and environmental requirements
	2.5. Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel
	2.6. Material is safely <i>stacked</i> in a designated location in line with work order requirements
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. Saw blades are checked for blunt or damaged condition
	3.3. Saw blades are removed and replaced in line with manufacturer's recommendations
	3.4. Saw area is kept clear of dust, off-cuts and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely trim new panels to size
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for trimming new panels to size
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment

REQUIRED SKILLS AND KNOWLEDGE

- Organisational and site standards, requirements, policies and procedures for trimming new panels to size
- Environmental risks and hazards
- Characteristics of timber panels and timber panel defects
- Production trimming sequences
- Saw blade condition assessment
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently trim new panels to size within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to trimming new panels to size
- following organisational policies and procedures relevant to trimming new panels to size
- trimming new panels to size in line with the work order and within prescribed organisational tolerances

EVIDENCE GUIDE

Context of and specific resources for assessment

- conducting operator maintenance on trimming saws
- stacking batches of cut material in line with organisational requirements and OHS regulations
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to

EVIDENCE GUIDE

Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- instructions for the trimming and despatch of timber panel products from the work site

Organisational requirements
may include:

Work order is to include:

and may include:

- type
- size
- length
- angle
- quantity
- grade
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

RANGE STATEMENT

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Panels may include:

- medium density fibreboard
- laminated veneer
- chipboard
- fibreboard
- plywood
- continuous ply
- other manufactured board products

Trimming is to include:

- the process of automated trimming saws cutting across new panels
- trimming them to size, as they progress along the production line

Storage locations may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment is to include:

- procedures for saw lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

RANGE STATEMENT

Trimming sequence	is the timing and stopping of new panel to allow trimming to occur to set sizes
Communication may include:	<ul style="list-style-type: none">• verbal and non-verbal language• constructive feedback• active listening• questioning to clarify and confirm understanding• use of positive, confident and cooperative language• use of language and concepts appropriate to individual social and cultural differences• control of tone of voice• body language
Feed system may include:	<ul style="list-style-type: none">• conveyor belt systems• tracks• sliding systems
Panel production run	is the batch of board forming as it progresses through the stages to become a solid panel capable of being trimmed
Tolerances	are a set limit for cutting over or under the required length within a set margin of acceptance usually + or - 0.5 mm or in line with order or organisational requirements
Defects may include:	<ul style="list-style-type: none">• panel warp• wane• cupping and veneer or plywood defects including shakes• insect defects• knots• resin pockets
Disposing of may include:	<ul style="list-style-type: none">• recycling material with defects, incorrect cuts and off-cuts• reusing material with defects, incorrect cuts and off-cuts
Records and reports may include:	<ul style="list-style-type: none">• product type• size• inspection• grading and labelling outcomes• storage locations

RANGE STATEMENT

- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Stacking may include:

- preparing for transport
- categorising in common
 - size
 - thickness
 - length and angle
- marking lots in line with work order and site requirements
- locating so as not to block access or passage

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3222B Press laminated ply

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to set up, operate and shut down hot and cold presses as well as their combined operation used to press laminated ply

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3222A Press laminated ply

Application of the Unit

Application of the unit

The unit involves pressing laminated ply in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for pressing	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to pressing laminated ply are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of ply to be pressed is acquired from the assembly process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Pressing</i> process is selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Press ply	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Press <i>cycle</i> times, pressures, temperatures and product parameters are set and adjusted for production requirements</p>

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|--------------------------|---|
| 3. Unload and load press | <p>2.3. Assembled ply is <i>assessed</i> and <i>tack level</i> checked before loading with defective assemblies returned for reworking</p> <p>2.4. Hot or cold press is operated to press boards and monitored in line with site requirements</p> <p>2.5. Unload and reload cycles are performed</p> <p>2.6. Pressed and finished ply is regularly assessed and necessary changes to assembly and pressing processes actioned</p> <p>2.7. Sub-standard pressed ply is <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.8. Pressing process and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p> <p>3.1. Press is opened in line with operating procedures</p> <p>3.2. Ply and <i>plates</i> are separated and removed</p> <p>3.3. Ply is loaded into transport or storage racks for cooling</p> <p>3.4. Plate condition is monitored during unloading, cleaned and sprayed with <i>release agent</i> with defective plates removed for repair</p> <p>3.5. Assembled ply, plates and <i>overlay panels</i> are stacked in the press to specified height or number and squareness</p> <p>3.6. Finished ply is <i>transferred</i> for further processing in line with site requirements</p> |
|--------------------------|---|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely press ply
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to

REQUIRED SKILLS AND KNOWLEDGE

complete a task

- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Basic knowledge and understanding of applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for pressing laminated ply
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for pressing laminated ply
- Environmental risks and hazards
- Ply pressing processes
- Laminated ply characteristics
- Hot, cold and combination pressing methods
- Storage systems and labelling
- Established communication channels and protocols
- Principles of cultural diversity and access and equity
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently press laminated ply in line with organisational requirements

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to pressing laminated ply
- following organisational policies and procedures relevant to pressing laminated ply
- pressing ply in readiness for storage and/or processing
- operating hot and cold pressing equipment to produce laminated ply
- redistributing material on site using designated equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge

EVIDENCE GUIDE

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management

RANGE STATEMENT

- elimination of hazardous materials and substances
 - safe forest practices including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Ply** may include:
- species
 - veneer type

RANGE STATEMENT

- laminating method
 - number of plies
 - thickness and sheet size to form a ply assembly (the number of plies glued to form a plywood sheet)
- Work order** is to include:
- instructions for the receipt/despatch and pressing of ply to/from the designated storage location or processing

and may include:

- texture
 - colour
 - type
 - size
 - thickness
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Equipment** is to include:
- cold and hot presses with temperature control, steam pressure control, load and cycle times

Pressing is the process of using a cold or heat driven press to use weight or steam generated pressure to compress the multiple layers of pre-bonded plies together between pressing plates

- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice

RANGE STATEMENT

- body language
- Pre start-up checks** are conducted to ensure:
- equipment has been set-up correctly
 - systems are performing accurately
 - machinery is operating to optimum performance
- Cycle**
- is the process of forming ply and pressing it until it is ready for cooling
 - includes unloading the press and restarting the process to commence another cycle
 - process includes time, pressure and temperature considerations
- Assessing** is to include:
- production conditions (glue application, pre-press delays and ambient temperature)
 - ply assembly (tack level, glue transfer, grip and moisture content)
 - finished ply (thickness, thickness distribution, alignment of veneer, bond strength, ply adhesion, foreign material and overall appearance)
- Tack level** is the degree of stickiness the bonding adhesive (between laminates) is at to be deemed ready for pressing
- Disposing of** may include:
- recycling sub-standard pressed ply
 - re-using sub-standard pressed ply
- Records and reports** may include:
- material type
 - product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system

RANGE STATEMENT

- Release agent**
- prevents panels or adhesives from sticking to the pressing plates
 - ensures clean separation at opening and unloading
- Overlay panels**
- provide protection to the ply assemblies being pressed from the pressing plates
 - are the first and last sheets placed in the press
- Transferral** may include:
- the use of conveyor belt systems
 - track systems
 - lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
 - assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- Shutdown** is to include:
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
 - cleaning and maintaining all parts

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field

Wood Panel Products

FPIWPP3223B Immunise veneer

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan for the immunisation process, prepare the chemicals, treat the veneer to protect it against insect attack and pack the veneer

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3223A Immunise veneer

Application of the Unit

Application of the unit

The unit involves immunising veneer in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for immunisation	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to immunising veneer are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>veneer</i> to be <i>immunised</i> is assessed and acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Immunising process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Immunise veneer	<p>2.1. Type and quantity of <i>chemicals</i> and <i>solutions</i> is acquired from planned treatment cycles and prepared</p> <p>2.2. Ancillary equipment used for addition of solution chemicals is operated in line with operating</p>

ELEMENT	PERFORMANCE CRITERIA
	procedures
	2.3. Samples of solution are regularly taken for <i>testing</i> in line with standard operating procedures
	2.4. Load and unload <i>cycles</i> are planned to provide selected treatment and drainage time for veneer
	2.5. Veneer is loaded and unloaded from <i>solution tanks</i> in line with operating procedures
	2.6. <i>Transfer equipment</i> is operated to shift veneer and <i>visual assessment</i> of treated veneer undertaken to establish modifications to treatment process
	2.7. Drainage of treated veneer is monitored to ensure even drying
	2.8. Dried veneer panels are packed and <i>marked</i> in line with standard operating procedures
	2.9. Veneer panels where the immunisation process has failed are rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	2.10. Veneer immunising process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Clean up and store chemicals	3.1. Veneer immunisation clean up procedures are followed in line with OHS legislation and site procedures
	3.2. Treating mechanisms are checked for effective condition
	3.3. Treatment area is kept clear of dust, shavings and debris in line with OHS requirements
	3.4. Chemicals and solutions are stored in line with statutory requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely immunise veneer
- Communication skills and interpersonal techniques sufficient to interact

REQUIRED SKILLS AND KNOWLEDGE

appropriately with colleagues and others in the workplace

- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for immunising veneer
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for immunising veneer
- Environmental risks and hazards
- Veneer immunising techniques
- Methods of visual inspection
- Characteristics of veneer, chemicals and chemical solutions
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must

EVIDENCE GUIDE

be able to provide evidence that they can safely and efficiently immunise veneer in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to immunising veneer
- following organisational policies and procedures relevant to immunising veneer
- immunising veneer in readiness for storage and/or processing

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related

EVIDENCE GUIDE

conditions (real or simulated) and require evidence of process

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and

RANGE STATEMENT

substances

- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for veneer immunising

and may include:

RANGE STATEMENT

- treating method
- colour
- type
- width
- length
- thickness
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Veneer

- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of plywood
- types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn

Immunising

is the process of dipping veneer in solution tanks filled with chemical solutions designed to penetrate the veneer, kill any existing insects and prevent any further insect attack which may affect the visual appearance of the veneer

Storage locations may include:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension

RANGE STATEMENT

	<ul style="list-style-type: none"> • stack number • weight • grade • shelf life • stock rotation position
Equipment may include:	<ul style="list-style-type: none"> • chemical solution tanks • chemical mixing and transfer equipment • veneer transfer equipment <p>and is to include:</p> <ul style="list-style-type: none"> • procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
Communication may include:	<ul style="list-style-type: none"> • verbal and non-verbal language • constructive feedback • active listening • questioning to clarify and confirm understanding • use of positive, confident and cooperative language • use of language and concepts appropriate to individual social and cultural differences • control of tone of voice • body language
Chemicals may include:	<ul style="list-style-type: none"> • insecticides • solvents • preservative oils • waterborne preservatives
Solutions	are the mix of chemicals to achieve enterprise, customer requirements and/or regulations
Testing	is conducted to ensure the chemical solution is still as specified
Cycle	is the process of immunising veneer from start to finish with one batch of veneer and then commencing a new cycle
Solution tanks	are large tanks filled with chemical solution that veneer is transferred to and held suspended in, for the specified time to allow the chemicals to impregnate the veneer

RANGE STATEMENT

Transfer equipment may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Visual assessment

is the assessment of veneer to determine finish quality and faults

Marking may include:

- batch number
- treatment type
- client identification
- destination
- address
- contents
- special instructions
- handling instructions

Disposing of may include:

- recycling veneer panels where the immunisation process has failed
- re-using veneer panels where the immunisation process has failed

Records and reports may include:

- treating requirements
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

RANGE STATEMENT

- manual
using a computer-based system or other
appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3224B Profile sand products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to sand profiled surfaces of products to achieve a smooth surface on a curved or shaped article

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3224A Profile sand products

Application of the Unit

Application of the unit The unit involves profile sanding products in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for sanding	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative and organisational requirements</i> relevant to profile sanding products are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>profiles</i> to be <i>sanded</i> is acquired from the production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Sanding process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Sand profiles	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Sanding profile and <i>feed rate</i> are set for optimal smoothing of product and adjusted to suit varying products</p>

ELEMENT	PERFORMANCE CRITERIA
	2.3.Sanding is conducted in line with site requirements
	2.4. <i>Dust extraction</i> equipment is regularly checked and cleaned to avoid blockages
	2.5. <i>Products</i> are <i>visually assessed</i> to ensure specified outcome has been achieved
	2.6. <i>Sanding medium</i> is removed and replaced when worn
	2.7.Products with sanding defects are rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	2.8.Sanding process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Redistribute material	3.1.Products are <i>regraded</i> in line with site requirements and industry standards
	3.2.Material is directed and <i>moved to storage</i> or processing operations in line with site requirements
	3.3.Sub-standard material is rejected and disposed of in line with site requirements
	3.4.Work area is cleaned in line with site requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely sand profiles; effectively visually assess product quality
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for profile sanding products
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for profile sanding products
- Environmental risks and hazards
- Sanding techniques
- Products and profile types
- Methods of visual inspection
- Characteristics of timber and panels
- Distribution processes
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently sand profiled products in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to profile sanding products
 - following organisational policies and procedures relevant to profile sanding products
 - profiling sanding products in readiness for coating, despatch or for interim storage
 - redistributing material on site using designated equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT

may include:

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for profile sanding of timber or panels

and may include:

- species
- colour
- type
- width
- length

RANGE STATEMENT

- thickness
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Profiles** are the shapes which have been moulded onto timber or cut in panels which the sander in turn must match
- Sanding** is the process of finishing or smoothing timber or panels and removing any machine marks or imperfections to an acceptable standard of smoothness or surface texture, which will allow coating
- Equipment** is to include:
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language
- Pre start-up checks** are conducted to ensure:
- machine has been set-up correctly
 - systems are performing accurately
 - machinery is operating to optimum performance

RANGE STATEMENT

- Feed rate** is to include:
- the rate of speed the timber or panel is passed through the sanding machine
 - the impact on equipment
 - the finish
 - the production output
- Dust extraction** is to include:
- machine specific dust extraction systems with collection bags
 - hopper based extraction systems which link all machines to the one extractor source through a series of connected pipes
- Products** may include:
- solid timber or panel moulded strips
 - building components
 - furniture components
 - bench tops
 - shaped panels
 - any articles with moulded or shaped edges/surfaces
- Visually assessed** is to include:
- thickness
 - finish quality
 - sanding faults
- Sanding medium** may include:
- sandpaper
 - emery cloth
 - sanding belts
 - other enterprise selected medium
- Disposing of** may include:
- recycling products with sanding defects
 - re-using products with sanding defects
- Records and reports** may include:
- sanding requirements
 - product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication

RANGE STATEMENT

system

Regrading

is the process of visually inspecting timber or panels to re-classify quality and use after sanding has taken effect

Movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3225B Produce profile sanding shoes and wheels

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to produce profile sanding shoes and wheels which match the product profile to be sanded

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

Application of the Unit

Application of the unit The unit involves producing profile sanding shoes and wheels in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for production	<p>1.1. Applicable <i>Occupational Health and Safety (OHS), environmental, legislative and organisational requirements</i> relevant to producing profile sanding shoes and wheels are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>blanks</i> for <i>shoes and wheels</i> to be produced is acquired from stock</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Production process</i> is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Produce shoes and wheels	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Template</i> is produced from tin or other metal plate to match profile</p> <p>2.3. Shoe or wheel is positioned in the machine and shaped in line with the template, stopping regularly to check shaping with template</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Wheels or shoes are labelled to follow the profile
	2.5. Wheels or shoes are installed into the <i>profile sander</i> in readiness for profile sanding operations
	2.6. Templates with defects are rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	2.7. Production process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. Shoe or wheel shaping equipment is checked for condition and maintained
	3.3. Shaper cutters are checked for blunt or damaged condition and sharpened
	3.4. Tool room is cleaned and cleared of waste in line with site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely produce profile sanding shoes and wheels
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of

REQUIRED SKILLS AND KNOWLEDGE

processes for producing profile sanding shoes and wheels

- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing profile sanding shoes and wheels
- Environmental risks and hazards
- Profiling techniques
- Wheel and shoe production methods
- Set-up of profile sanding equipment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce profile sanding shoes and wheels in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to producing profile sanding shoes and wheels
- following organisational policies and procedures relevant to producing profile sanding shoes and

EVIDENCE GUIDE

- wheels
- Context of and specific resources for assessment**
- producing profile sanding shoes and wheels in readiness for insertion in profile sanding machines to match given profiles
 - installing profile sanding shoes and wheels
 - Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency
 - The assessment environment should not disadvantage the candidate

EVIDENCE GUIDE

- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth,

RANGE STATEMENT

State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Organisational requirements may include:

Work order is to include:

instructions for profiles of sanding wheels and shoes including:

- size
- shape
- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients

RANGE STATEMENT

- colleagues
- managers

Blanks

are the outer part of the profile sander wheels and shoes with their hard rubberised/plasticised surface (like a solid tyre) which are then shaped to meet the need of a given profile

Shoes and wheels

- are the attachments on the profile sanding machine which provide the sanding medium support to achieve profile
- shoes are a static part
- wheels are a moving part

Equipment is to include:

- shoe and wheel shaping equipment such as milling machines and metal lathes
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source

Production process is to include:

- mounting a wheel in a metal lathe
- shoe in a milling machine
- forming the shape of the profile in the blank with the aid of a template

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

Template

- is a thin piece of metal such as tin which is cut to match the profile of the product requiring profile sanding
- is used to gauge the shaping process to achieve

RANGE STATEMENT

- Profile sander**
- the matching shape on the blank wheel or shoe
 - is the piece of machinery which profile sands timber and timber components
 - utilises wheels and shoes to provide a base to the sanding medium which in turn smoothes the timber
- Disposing of** may include:
- recycling templates with defects
 - re-using templates with defects
- Records and reports** may include:
- shaping requirements
 - product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3226B Operate a continuous press

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to set-up, operate and shut-down the continuous press to form and press board for a range of available boards

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPI3226A Operate a continuous press

Application of the Unit

Application of the unit The unit involves operating a continuous press in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for pressing	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to operating a continuous press are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>chips, flakes or fibre</i> to be pressed is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. <i>Pressing</i> process is selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Form and press board	<p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Press pressures, temperatures and product parameters are set and adjusted for production requirements</p> <p>2.3. Operational condition and set-up of <i>former</i> is</p>

ELEMENT**PERFORMANCE CRITERIA**

- checked to confirm mat condition
- 2.4. **Forming equipment** is checked for defects and positioned to load press in line with operating procedures
- 2.5. Boards are pressed while monitoring and adjusting board position, **feed rate**, mat condition and press condition
- 2.6. Size changes and line speeds are planned to meet production schedules
- 2.7. Pressed board and thickness changes are regularly assessed and necessary changes made to former, press set-up and **blending** requirements
- 2.8. Board samples are **tested** to confirm following of industry standard and to check for **defects**
- 2.9. Finished boards are **transferred** for further processing in line with site requirements
- 2.10. Finished boards with defects are rejected and **disposed of** in line with site procedures and environmental requirements
- 2.11. Pressing process and equipment faults are **recorded and reported** to the appropriate personnel
3. Shut down and clean equipment
- 3.1. **Shutdown** procedures are coordinated with designated stop time and other line operators, and followed in line with OHS legislation and site procedures
- 3.2. Board and forming equipment are separated and removed from press using unloading equipment
- 3.3. Blending equipment, press and handling equipment are stripped and cleaned in line with site operating procedures
- 3.4. Machine area is kept clear of foreign material, dust and debris in line with OHS requirements

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

REQUIRED SKILLS AND KNOWLEDGE

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely press board with a continuous press
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and maintain information relating to pressing board with a continuous press
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Basic knowledge and understanding of applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for operating a continuous press
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a continuous press
- Environmental risks and hazards
- Board pressing processes
- Continuous press procedures
- Chip, flake and fibre characteristics
- Blending methods
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently press board with a continuous press in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to operating a continuous press
- following organisational policies and procedures relevant to operating a continuous press
- pressing board with a continuous press in readiness for storage and/or processing
- operating the blending and continuous press equipment to bond and produce board
- redistributing material on site using designated equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks,

EVIDENCE GUIDE

with questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements

RANGE STATEMENT

- Board** may include:
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - medium density fibreboard
 - chipboard
 - fibreboard
 - other manufactured board products
- Work order** is to include:
- instructions for the receipt/despatch and pressing of board to/from the designated storage location or processing
- and may include:
- texture
 - colour
 - type
 - size
 - thickness
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Chips, flakes and fibre**
- chips are an output of breaking down logs into wood chips approximately the size of a 50 cent coin and then breaking these down to form smaller chips for chipboard production
 - fibre is the output product as a result of smashing wood chips into fibrous material which is then used to produce medium density fibreboard
 - flakes are the output product as a result of converting wood chips into a thinner chip material which is then used to produce panel products
- Storage location** may include: the use of:
- storage racks
 - storage bays

RANGE STATEMENT

- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment is to include:

- continuous presses with continuous forming lines

Pressing

- is the process of compressing the blended chips, flakes or fibre into board using formers and a heat driven press system
- includes consideration of weight, thickness, length, width, bond, porosity, moisture content, bare fibres, foreign material, visual appearance, surface blemishes and trimmed edge appearance

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately

RANGE STATEMENT

- machinery is operating to optimum performance
- Former** is the piece of equipment which shapes the molten chips, flakes or fibre into sheet form
- Forming equipment** is to include:
- mats
 - screens
 - trays
 - plates
- Feed rate** is the rate of speed the blended material is pumped into the former
- Blending** is the mixing of the chips, flakes or fibre with the binding ingredients and hardening agents
- Testing**
- is the process of measuring moisture content, weight, thickness and density of the panels to achieve the desired outcome for all of these
 - information ensures accurate forming and cycle times and allows for adjustment of the cycles accordingly
- Defects may include:**
- surface blemishes
 - discolouration
 - natural timber defects
 - clean scalping from pendistors
 - forming deformities
- Transferral** may include: the use of:
- conveyor belt systems
 - track systems
 - lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
 - assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment
- Disposing of** may include:
- recycling finished boards with defects
 - re-using finished boards with defects

RANGE STATEMENT

Records and reports may include:

- material type
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
 - using a computer-based system or other appropriate organisational communication system
- Shutdown** is to include:
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
 - cleaning and maintaining all parts

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3227B Vacuum paint

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to paint articles using a vacuum painting line with drying ovens and de-nibbing machines

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3227A Vacuum paint

Application of the Unit

Application of the unit

The unit involves vacuum painting in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------|---|
| 1. Prepare for painting | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to vacuum painting are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of articles to be vacuum painted is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Vacuum painting process, <i>feed rates</i> and <i>paint</i> are selected and planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Vacuum paint | <p>2.1. Paint products are loaded in equipment in line with manufacturer's specifications</p> <p>2.2. <i>Paint templates</i> are manufactured and fitted to manufacturer's specifications</p> <p>2.3. Vacuum coater is run in line with recipes and</p> |

ELEMENT**PERFORMANCE CRITERIA**

- manufacturer's recommendations
- 2.4. Paint is applied with flow rates and *viscosity* continually monitored and adjusted in line with site requirements
- 2.5. Paint operations and *wet film thickness* are continually checked with blockages and filters cleared to maintain paint coverage to specifications
- 2.6. Products are regularly checked for surface quality and *contamination* in line with site requirements and corrective action taken
- 2.7. Sub-standard painted items are removed from the painting process and reviewed for *further action*
- 2.8. Test equipment is calibrated and used to regularly test samples of paint
- 2.9. Processing and equipment faults are *recorded and reported* to the appropriate personnel
3. Operate drying oven
- 3.1. Ovens are started and brought to operating temperature in line with manufacturer's specifications
- 3.2. Oven drying processes are monitored in line with operating procedures
- 3.3. Products with oven drying defects are rejected and *disposed of* in line with site procedures and environmental requirements
- 3.4. Adjustments to drying operations are made in response to paint adhesion test results
4. Operate de-nibber
- 4.1. De-nibbing machine is set-up and started in line with manufacturer's recommendations
- 4.2. Profile flap brushes are selected and installed
- 4.3. Sample strips are processed and assessed
- 4.4. Products with de-nibber defects are rejected and disposed of in line with site procedures and environmental requirements
- 4.5. Adjustments to de-nibbing process are made in line with sample results
- 4.6. De-nibbing machine is operated and monitored in line with standard operating procedures
- 4.7. Routine de-nibbing problems are investigated and resolved
5. Shut down and clean equipment
- 5.1. *Shutdown* procedures are coordinated with other line operators and followed in line with OHS legislation and site procedures
- 5.2. Vacuum coater, dryer and de-nibber are turned off

ELEMENT**PERFORMANCE CRITERIA**

- and equipment flushed in line with organisational standard operating procedures
- 5.3.Excess paint and flushing liquid are disposed of in line with statutory requirements and environmental regulations
- 5.4.Equipment and paint are stored in line with statutory requirements and environmental regulations

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- The ability to follow legislation, regulations, standards, codes of practice and established safe practices and procedures relevant to using a vacuum painting line with drying ovens and de-nibbing machines
- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely vacuum paint
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Basic knowledge and understanding of applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for vacuum painting
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for vacuum painting
- Environmental risks and hazards
- Vacuum painting operations

REQUIRED SKILLS AND KNOWLEDGE

- Paints, their viscosity, film thickness, film wetness and feed rates
- Paint operations and shut down procedures
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently vacuum paint within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to vacuum painting
- following organisational policies and procedures relevant to vacuum painting
- using vacuum paint in line with the work order and within prescribed organisational requirements
- conducting paint operations and shut-down procedures

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised

EVIDENCE GUIDE

work practices, safety requirements and environmental constraints

- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity

RANGE STATEMENT

Organisational requirements may include:

- anti-discrimination
- relevant industry codes of practice
- duty of care
- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Vacuum painting

- consists of a small box-like chamber with a part profile cut into two opposite sides where preheated parts are passed through the chamber and flooded with paint
- places this chamber under constant negative pressure to prevent paint escaping from the openings
- allows the painting operation to easily keep up with the rest of the line by painting at least three parts per minute
- process conveys parts from the paint station, into a drying oven where they emerge 10 minutes later, dry and ready for packaging
- instructions for the painting of products

Work order is to include:

and may include:

- type
- size
- length
- thickness
- quantity
- grade
- instructions for the environmental monitoring

RANGE STATEMENT

- of work and procedures
- environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Storage locations** may include: the use of:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- and may be divided into:
- standard product classification
 - product designation
 - size
 - dimension
 - stack number
 - weight
 - grade
 - shelf life
 - stock rotation position
- Equipment** is to include:
- vacuum painting chambers
 - drying ovens
 - de-nibbers together with continuous roller conveyors
- Feed rates** is to include:
- the rate of speed the paint is passed through the vacuum painting equipment affecting the risk of equipment blockage
 - the finish of the material
 - the production output
- Paint** includes:
- paints suitable to vacuum coating
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback

RANGE STATEMENT

- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language
- see vacuum painting

Paint template

Viscosity

is the amount of resistance to flow or stickiness of the paint

Wet film thickness

is the amount of paint build up, while wet, maintained over the timber product during the painting process

Contamination may include:

- dust
- water spots
- oil spots from equipment or oily finger prints

and may cause:

- orange peel effect
- incomplete cover
- solvent boil
- other coating defects

Further action may include:

- re-painting sub-standard painted items
- recycling sub-standard painted items
- re-using sub-standard painted items

Records and reports may include:

- product type
- feed rate
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system

RANGE STATEMENT

- Disposing of** may include:
- Shutdown** is to include:
- other appropriate organisational communication system
 - recycling products with defects
 - reusing products with defects
 - procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source cleaning and maintaining all parts
 - storage of paints

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3228B Dry Wood Flakes

Modification History

Required Skills and Knowledge updated, Evidence Guide updated, Range Statement updated.
Equivalent to FPIWPP3228A

Unit Descriptor

Unit descriptor This unit describes the outcomes required to dry wood flakes for downstream use in board production, operate dryers and other ancillary equipment

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3228A Dry wood furnish

Application of the Unit

Application of the unit The unit involves drying wood flakes in a forest products factory setting. The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-----------------------|---|
| 1. Prepare for drying | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to drying wood flakes are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>flakes</i> to be <i>dried</i> is assessed and acquired from the production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Drying process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Dry flake | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. Dryer and hot oil system are started and continually monitored in line with operational procedures</p> <p>2.3. <i>Emergency shut-down</i> procedures are followed in</p> |

ELEMENT	PERFORMANCE CRITERIA
	response to a fire
	2.4. Drying temperature, humidity and <i>feed rate</i> are set for optimal recovery of product
	2.5. Flake is positioned and fed at rate appropriate to the machine speed, capacity, flake <i>moisture content</i> , thickness and condition
	2.6. Flake is <i>visually assessed</i> and moisture levels measured to ensure specified outcome has been achieved
	2.7. <i>Out-feed</i> is coordinated to ensure efficient recovery of dried flake
	2.8. Sub-standard flake is rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	2.9. Drying process and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Redistribute flake	3.1. Flake is <i>regraded</i> in line with site requirements and industry standards
	3.2. Flake is directed and <i>moved to storage</i> or processing operations in line with site requirements
	3.3. Sub-standard material is rejected and disposed of in line with site requirements
	3.4. Work area is cleaned in line with site requirements
4. Conduct operator maintenance	4.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	4.2. Drying mechanisms are checked for effective condition
	4.3. Oil levels, air filters, conveyors and chains are checked, replenished or maintained
	4.4. Drying area is kept clear of dust, shavings and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

REQUIRED SKILLS AND KNOWLEDGE

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely dry flake; safely operate dryer and hot oil systems; visually assess flake
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for drying wood flakes
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for drying wood flakes
- Drying techniques
- Methods of visual inspection and characteristics of flake
- Distribution processes
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information
-

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently dry flake in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to drying wood flakes
- following organisational policies and procedures relevant drying wood flakes
- drying flake in readiness for storage and/or processing
- redistributing flake on site using designated equipment
- conducting operator maintenance on drying equipment

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must

EVIDENCE GUIDE

also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment

RANGE STATEMENT

- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements
may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements

RANGE STATEMENT

(waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

- instructions for the drying of flake

and may include:

- species
- colour
- type
- size
- thickness

and may also include:

- quantity
- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Flakes

- are used to produce chipboard
- are another process of breaking down wood or wood chips

Drying may include:

- pre-dryers
- dryers
- cooling sections
- steam
- heated air
- gas

Equipment may include:

- single pass or multi pass dryers
- flash dryers
- furnaces and ancillary equipment such as continuous conveyor
- pre-dryers
- cooling sections
- dry and wet silo storage
- fuel feed systems
- combustors
- oil heating systems

RANGE STATEMENT

- dust silos
- emergency generators
- effluent systems
- sluice systems
- recirculated air systems
- furnace systems
- fire control and suppression systems
- knife mill systems
- wet gisiger systems
- in-feed systems

and is to include:

- procedures for equipment lock-out such as protecting operators and co-workers from accidental injury by isolating the machine from the power source

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machinery has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

Emergency shut-down

is the immediate shutting off of the equipment to prevent an accident or prevent damage to the machine or product

Feed rate is to include:

- the rate of speed the material is passed through the drying equipment
- the impact on equipment
- the finish
- the production output

RANGE STATEMENT

Moisture content

- is the amount of moisture maintained in timber or timber products after drying to avoid cracking and deforming
- in Australia generally ranges between 10% in warmer, more humid climates to 14% in cooler climates

Visually assessed is to include:

- the assessment of flakes to determine finish quality and faults

Out-feed

is the flake exiting from the drying operation

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Records and reports may include:

- drying requirements
- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system other appropriate organisational communication system

Regrading

is the process of visually inspecting flake to re-classify quality and use after drying has taken place

Movement of flakes may include: the use of:

- conveyor belt systems
- track systems
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders

RANGE STATEMENT

assistance with lifting such as:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3229B Classify flake

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to operate specialist equipment to classify flake in readiness for downstream production of panel products, while monitoring and maintaining the flow of operation. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3229A Classify flake

Application of the Unit

Application of the unit

The unit involves classifying flake in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------------|--|
| 1. Prepare for flake classification | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to classifying flake are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>flake</i> to be <i>classified</i> is <i>assessed</i> and acquired from the <i>stockpile</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Flake classifying process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Classify flake | <p>2.1. <i>Pre start-up checks</i> are carried out on equipment in line with site requirements</p> <p>2.2. <i>Screens</i> and <i>feed systems</i> are adjusted to separate flake into required sizes</p> |

ELEMENT	PERFORMANCE CRITERIA
	2.3. Equipment is operated to classify flake into size categories and regularly checked in line with site requirements
	2.4. Flake flow, usage and <i>silo</i> levels are monitored and action taken to ensure optimal production and availability of sufficient storage space
	2.5. Output is directed to designated silos and blockages immediately cleared to ensure smooth <i>transfer</i>
	2.6. Faults requiring <i>emergency shutdown</i> are detected and action taken to rectify the problem
	2.7. Flake unsuitable for classification is rejected and <i>disposed of</i> in line with site procedures and environmental requirements
	2.8. Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures
	3.2. <i>Grinding elements</i> are checked for faulty, blunt or damaged condition
	3.3. Grinding elements are removed and replaced in line with manufacturer's recommendations
	3.4. Machine and surrounding area is kept clear of foreign matter and debris in line with OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely classify flake
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task

REQUIRED SKILLS AND KNOWLEDGE

- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Basic knowledge and understanding of applicable Commonwealth, State or Territory legislation, regulations, standards and codes of practice relevant to the full range of processes for classifying flake
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for classifying flake
- Environmental risks and hazards
- Characteristics of flake and silo levels
- Flake classification process
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently classify flake within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

EVIDENCE GUIDE

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to classifying flake
 - following organisational policies and procedures relevant to classifying flake
 - classifying flake in line with the work order and within prescribed organisational requirements
 - conducting operator maintenance on flake classifying equipment
 - storing flakes in line with organisational requirements and OHS regulations
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE

particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and

RANGE STATEMENT

- carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the assessment of flake and the flake grade
- and may include:
- feed rate
 - quantity
 - instructions for the environmental monitoring

RANGE STATEMENT

- Appropriate personnel** may include:
- of work and procedures
 - environmental care requirements relevant to the work
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Flake** is the output product as a result of converting wood, wood dust, planer shavings, shredded board or woodchips into flake which is then used to produce panel products
- Classifying** is the separation of flake into size categories, species, core fraction, surface fraction, overs and dust
- Assessing** is to include:
- screen fractions
 - species
 - size
 - moisture content
 - contamination issues associated with selected flake
- Stockpile** is the piles of available wood flake ready for classification to size and species
- Equipment** may include:
- classifiers
 - flake towers
 - screens
 - sifters
 - silos
 - mechanised feed systems
- and is to include:
- procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding

RANGE STATEMENT

- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Pre start-up checks

are conducted to ensure:

- machine has been set-up correctly
- systems are performing accurately
- machinery is operating to optimum performance

Screens

are the sorting devices which separate flake according to size and type

Feed systems may include:

- conveyors
- transfer cars or chutes which continually provide flake to the classifier

Silos

are large storage towers or buildings where classified flake is pumped to in readiness for downstream production

Transfer is to include:

- the process of moving the classified flake from the classifier to the silos

and may include:

- regular feed systems
- blow lines
- drag chains

Emergency shutdown

is the immediate shutting off of equipment to prevent an accident or prevent damage to the machine or product

Disposing of may include:

- recycling flake unsuitable for classification
- re-using flake unsuitable for classification

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents

RANGE STATEMENT

- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Grinding elements may include:

- screens
- hammers
- blades contained within the classifier for the separation of flake

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3230B Produce decorative veneers

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to produce decorative veneers in readiness for application to chipboard, medium density fibreboard, plywood or other board products following customer order specifications

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3230A Produce decorative veneers

Application of the Unit

Application of the unit

The unit involves producing decorative veneers in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|-------------------------------------|---|
| 1. Prepare for production of veneer | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to producing decorative veneers are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>decorative veneer</i> to be <i>produced</i> is acquired from the veneer production process</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Veneer production process is selected in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Produce decorative veneer | <p>2.1. Veneer is selected for its decorative qualities, checked for <i>defects</i> and the layout designed</p> <p>2.2. Joining points are selected and the veneer is cut in</p> |

ELEMENT	PERFORMANCE CRITERIA
	<p>line with the <i>layout design</i></p> <p>2.3. Decorative veneers are prepared for joining and bonding to <i>panel product</i></p> <p>2.4. Completed veneers are checked for conformity to work order and any imperfections repaired</p> <p>2.5. Completed veneers are marked for designate joining sequence in line with the layout design</p> <p>2.6. Sub-standard decorative veneers are rejected and <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.7. Decorative veneer process and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p>
3. Redistribute material	<p>3.1. Veneer is <i>regraded</i> and joins assessed in line with site requirements and industry standards</p> <p>3.2. Material is directed and <i>moved to storage</i> or processing operations in line with site requirements</p> <p>3.3. Sub-standard material is rejected and disposed of in line with site requirements</p> <p>3.4. Work area is cleaned in line with OHS requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely produce decorative veneers
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for producing decorative veneers

- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing decorative veneers
- Environmental risks and hazards
- Decorative veneer selection
- Veneer matching and joining techniques
- Methods of visual inspection
- Distribution processes
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce decorative veneer in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to producing decorative

EVIDENCE GUIDE

- veneers
- following organisational policies and procedures relevant to producing decorative veneers
 - producing decorative veneers in readiness for joining and application to panel products or for interim storage
 - redistributing material on site using designated equipment
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
 - Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the underpinning knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation

Environmental requirements

RANGE STATEMENT

may include:

- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

instructions for producing decorative veneer

and may include:

- species
- colour
- type
- width
- length
- thickness

RANGE STATEMENT

- quantity matching method
 - joining method
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Decorative veneers** may include:
- growth ring
 - ray
 - ribbon
 - wavy
 - curly
 - fiddle-back
 - crotch
 - swirl
 - birds eye
 - burl
 - burr
 - butt
 - stump
- Production** may include:
- book matching
 - end matching
 - four piece butt matching
 - diamond matching
 - herring-bone matching
 - segmental matching
 - slip drawn matching
- Equipment** may include:
- clipping machines
 - guillotines
 - measuring equipment
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative

RANGE STATEMENT

language

- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Defects may include:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Layout design

is the production method stipulated by the work order or customer and is to be laid out in the pattern which best accentuates the decorative veneer

Panel products may include:

- medium density fibreboard
- chipboard
- fibreboard
- plywood
- other manufactured board products

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Regrading

is the process of visually inspecting veneer to re-classify its quality and use after production has

RANGE STATEMENT

taken effect

Movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks
 - gantry cranes
 - loaders
- assistance with lifting such as:
 - the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP3231B Produce veneer from prepared flitches

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to operate a vertical or horizontal slicing machine to produce leaves of timber veneer from prepared flitches. The unit includes operator maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP3231A Produce veneer from prepared flitches

Application of the Unit

Application of the unit The unit involves producing veneer from prepared flitches in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------|--|
| 1. Prepare for slicing | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to produce veneer from prepared flitches are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of timber species to be <i>sliced</i> is acquired from the <i>storage location</i></p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Veneer peeling or slicing process and thickness is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Slice veneer | <p>2.1. Size and condition of prepared <i>flitches</i> is checked as acceptable and flitches then loaded into the slicer</p> <p>2.2. Flitches are placed to maximise available veneer and waste product removed</p> |

ELEMENT**PERFORMANCE CRITERIA**

- | | | |
|----|------------------------------|--|
| 3. | Conduct operator maintenance | <p>2.3.Veneer slicing process is set and commenced to optimise veneer recovery in line with site procedures</p> <p>2.4.Machine speed and control of veneer cut are constantly adjusted to suit the flitch characteristics in line with site procedures</p> <p>2.5.Material with <i>defects</i> and reject flitch and backing-boards are <i>disposed of</i> in line with site procedures and environmental requirements</p> <p>2.6.Processing and equipment faults are <i>recorded and reported</i> to the appropriate personnel</p> <p>3.1.Equipment lock-out procedures are followed in line with OHS legislation and site procedures</p> <p>3.2.Cutting blades are checked for blunt or damaged condition in line with site procedures</p> <p>3.3.Cutting blades are removed and replaced in line with manufacturer's recommendations</p> <p>3.4.Machine area is kept clear of dust, off-cuts and debris in line with OHS requirements</p> |
|----|------------------------------|--|

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely slice veneer using a vertical or horizontal slicer
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for producing veneer from prepared flitches
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for producing veneer from prepared flitches
- Environmental risks and hazards
- Characteristics of flitches and timber defects
- Slicing processes using vertical or horizontal slicing equipment
- Cutting blade condition assessment
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently produce veneer from prepared flitches within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to producing veneer from prepared flitches

EVIDENCE GUIDE

- following organisational policies and procedures relevant to producing veneer from prepared flitches
 - producing veneer from prepared flitches in line with the work order and within prescribed organisational tolerances using the slicing method
 - conducting operator maintenance on a vertical or horizontal slicing machine
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other units of competency

EVIDENCE GUIDE

- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

RANGE STATEMENT

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Veneer

- is the thin sheet of timber (varying in thickness to suit organisational or customer specifications) used to produce the layers of plywood
- types are usually referred to as quarter sawn, back sawn and radial (or rotary) sawn
- instructions for the slicing of timber veneer from prepared flitches

Work order is to include:

and may include:

- type
- width

RANGE STATEMENT

- length
 - thickness
 - quantity
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Slicing** is the process of removing timber in leaf form from a prepared flitch using a vertical or horizontal slicing machine
- Storage locations** may include: the use of:
- storage racks
 - storage bays
 - bins
 - stacks
 - pallet boxes
 - modularised storage components
 - temporary stacking bays (stand, frame or ground)
- Equipment** is to include:
- a vertical or horizontal slicing machine
 - procedures for equipment lock-out, ie protecting operators and co-workers from accidental injury by isolating the machine from the power source
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice
 - body language

RANGE STATEMENT

Flitches

are logs which have been debarked and rough squared to be accommodated in a flitch slicing machine to allow the horizontal slicing of veneer, either quarter sawn or back sawn

Defects may include:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Disposing of may include:

- recycling material with defects and rejected flitch and backing-boards
- re-using material with defects and rejected flitch and backing-boards

Records and reports may include:

- product type
- size
- profile
- inspection
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or another appropriate organisational communication system

Unit Sector(s)

Unit sector

No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP4201B Plan and coordinate panel production

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit describes the outcomes required to plan the production of panels including forming boards, laminating boards and applying laminates or veneers to board, coordination of production processes and monitoring equipment and output

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP4201A Plan and coordinate panel production

Application of the Unit

Application of the unit The unit involves planning and coordinating panel production in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Plan production 2. Monitor panel production performance | <ol style="list-style-type: none"> 2.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to planning and coordinating panel production are identified and followed 2.2. Variations in panel characteristics are assessed, recorded and reported to <i>operators</i> 2.3. <i>Panel production</i> schedules are produced and applied in line with site procedures 2.4. <i>Panel type</i> and sizes including order information are planned, scheduled and communicated to operators 2.5. <i>Production methods</i> are planned and prescribed 2.6. <i>Communication</i> with others is established and maintained in line with OHS requirements 2.7. Production methods are reviewed for suitability to planned schedules and <i>production orders</i> 2.8. Panel production is monitored for effectiveness of |
|---|---|

ELEMENT**PERFORMANCE CRITERIA**

- forming, laminating or veneering procedures and condition of panels
- 2.9. Assistance is provided to operators with the evaluation of panels and production problems
- 2.10. Panel management and *output* are monitored to record possible process improvements
- 2.11. Panel production, major problems and equipment faults are investigated, *recorded and reported* in line with site requirements
- 2.12. Processes for rejecting and *disposing of* sub-standard panels produced are developed in line with site procedures and environmental requirements
3. Coordinate panel production
- 3.1. Production and output are monitored to record and action possible process improvements based on production methods and panels being processed
- 3.2. Modifications are made to production methods or schedules to ensure optimum performance and communicated to operators
- 3.3. Production improvement modifications are documented and communicated in line with site procedures
- 3.4. Production output details are obtained and recorded in line with site requirements
- 3.5. Produced panels are directed to *storage* or *transferred* for further processing
- 3.6. Operating logs and cutting records are completed and maintained to site standards

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely plan and coordinate panel production
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information,

REQUIRED SKILLS AND KNOWLEDGE

and maintain documentation

- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for planning and coordinating panel production
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for planning and coordinating panel production
- Environmental risks and hazards
- Panel production procedures and management
- Panel types and production methodologies
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and coordinate panel production in line with organisational requirements

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to planning and coordinating panel production
- following organisational policies and procedures relevant to planning and coordinating panel production
- planning and coordinating panel production for the enterprise
- modifying production methods and schedules for panel production within the enterprise
- coordinating personnel to follow planning, communications and scheduling for panel production

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge

EVIDENCE GUIDE

- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management

RANGE STATEMENT

- elimination of hazardous materials and substances
 - safe forest practices including required actions relating to forest fire
 - manual handling including shifting, lifting and carrying
- Environmental requirements** may include:
- legislation
 - organisational policies and procedures
 - workplace practices

Legislative requirements: are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
 - industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Operators are the personnel who use the production machinery and equipment to form and laminate

RANGE STATEMENT

boards, apply laminates and veneers to board

Panel production may include:

- board forming
- board lamination
- the application of laminates and veneers to boards

Panel types may include:

- laminated
- veneered
- plywood
- chipboard
- fibreboard
- medium density fibreboard

with a range of:

- sizes
- surface treatments
- thicknesses
- grades

Production methods may include:

- one or more of the following:

board forming, which is :

- the process of spreading a blend mixture over a former in line with order size and pressing it with heat and pressure to produce a hard panel

pressing board using the daylight process includes:

- compressing the blended chips, flakes or fibre into board using formers and a heat driven press system including consideration of weight, thickness, length, width, bond, porosity, moisture content, bare fibres, foreign material, visual appearance, surface blemishes and trimmed edge appearance

board laminating, which is to include:

- the glue mix used to bond and press sheets of paper to varying types of board (usually a type of ply) including panel size, panel thickness, glue application and finishing processes

and may include:

- the process of trimming paper to a square edge or bevel
- pressing laminated ply using a cold or heat

RANGE STATEMENT

driven press to use weight or steam generated pressure to compress the multiple layers of pre-bonded plies together between pressing plates

application of laminates or veneers, which is to include:

- the glue mix used to bond sheets of veneer or laminate to varying types of board including panel size, panel thickness, laminate or veneer type, glue application and finishing processes. It may include the process of trimming laminate or veneer to a square edge or bevel

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

Production order is to include:

- instructions for the production of panels and despatch to downstream operations

and may include:

- batch requirements
- type of product
- size
- quantity
- grade

Output is to include:

- size
- volume recovery
- finish
- dimensional consistency
- quality of panels produced

Records and reports may include:

- planning and monitoring outcomes
- operating logs
- production records
- material movement
- despatch outcomes

RANGE STATEMENT

- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system other appropriate organisational communication system

Disposing of may include:

- recycling sub-standard panels produced
- re-using sub-standard panels produced

Storage may include:

the use of:

- storage racks
- storage bays
- bins
- stacks
- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Transferral may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment such as:
 - fork lifts
 - slings
 - trolley jacks

RANGE STATEMENT

- gantry cranes
- loaders

assistance with lifting such as:

- the involvement of two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

FPIWPP4202B Perform laboratory testing

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to test blends, glues, additives, materials, products and any other entities produced by the enterprise, to ascertain causes of a problem or to improve techniques

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIWPP4202A Perform laboratory testing

Application of the Unit

Application of the unit

The unit involves performing laboratory testing in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|------------------------|--|
| 1. Prepare for testing | <p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to performing laboratory testing are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of entities for <i>testing</i> is obtained</p> <p>1.4. <i>Equipment</i> is selected and <i>calibrated</i> appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations</p> <p>1.5. Testing process is selected and planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Test samples | <p>2.1. Problem or improvement requirement is interpreted and analysed</p> <p>2.2. Samples are prepared and manufacturing dates, times and batches identified from production records</p> |

ELEMENT	PERFORMANCE CRITERIA
3. Evaluate and report test outcomes	2.3. Test data is established, reviewed and interpreted 2.4. Test is conducted in line with industry standards 2.5. Results are checked by further sampling and testing 3.1. Results of tests are evaluated for implication and impact on production process 3.2. Action is taken to rectify or improve upon the test results achieved 3.3. Test results are communicated to production personnel to facilitate process control or changes 3.4. Results are provided to <i>external authorities</i> in line with registration systems 3.5. Testing process and equipment faults are <i>recorded and reported</i> to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely perform laboratory testing
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for performing laboratory testing
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

- performing laboratory testing
- Environmental risks and hazards
- Sampling and testing techniques
- Characteristics of ingredients, additives and other entities
- Laboratory testing conditions and facilities
- Storage systems and labelling
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently perform laboratory testing within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to performing laboratory testing
- following organisational policies and procedures relevant to performing laboratory testing
- performing laboratory testing in line with the work order and within prescribed organisational requirements

EVIDENCE GUIDE

Context of and specific resources for assessment

- constructing testing procedures for given entities
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

EVIDENCE GUIDE

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements

RANGE STATEMENT

- industrial relations
 - Australian Standards
 - confidentiality and privacy
 - OHS
 - the environment
 - equal opportunity
 - anti-discrimination
 - relevant industry codes of practice
 - duty of care
- Organisational requirements** may include:
- legal
 - organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - OHS, emergency and evacuation procedures
 - ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the sampling and testing of stated entities including expected reporting intervals
- and may also include:
- instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- external agencies
 - supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Testing** is to include:
- the most appropriate approach taken to ascertain the cause of a problem or to improve

RANGE STATEMENT

a current methodology

and may include:

Equipment may include:

- designing the testing process
- a range of laboratory testing equipment
- tools
- gauges

Calibration

is the setting of testing equipment to follow the convention, which in turn checks their accuracy and ensures accurate test results

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice
- body language

External authorities may include:

- environmental agencies
- local authorities
- State/Territory or Federal governments

Records and reports may include:

- testing results
- quantities produced
- condition changes
- production difficulties
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Wood Panel Products

AHCBUS502A Market products and services

Modification History

Not Applicable

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit covers the marketing of products and services and defines the standard required to collect, analyse and present data in the internal and external business environment; assess alternative marketing strategies and techniques to meet business plan objectives; plan and implement a marketing strategy; and monitor product, pricing and distribution policies to improve market performance.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>This unit applies to those who market products and services in an agricultural, horticultural or land management enterprise.</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

<p>Prerequisite units</p>		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse market information	<p>1.1. Markets for existing or new products or services are identified, researched and analysed for possible entry or development.</p> <p>1.2. Past trends and developments are analysed to determine market variability and associated risks.</p> <p>1.3. Market environment is continually monitored in a consistent manner to ensure information is current and reliable.</p> <p>1.4. The legal, ethical and environmental constraints of the market(s) and their effect on the enterprise are identified.</p> <p>1.5. Product mix that suits market requirements/price advantage at the time is adopted.</p>
2. Develop a marketing plan	<p>2.1. Alternative marketing strategies and techniques are assessed and interpreted to identify marketing targets and methods.</p> <p>2.2. Marketing strategies are based on reliable data, market environment and substantiated trends.</p> <p>2.3. Marketing options incorporate suitable advice from marketing professionals.</p> <p>2.4. A measurable cost-effective marketing plan is developed incorporating a reasoned analysis of market research and business plan objectives.</p>
3. Implement marketing activities	<p>3.1. Planned marketing activities are scheduled within appropriate timeframes.</p> <p>3.2. Measurable performance targets are developed and meet business plan objectives.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Distribution channels are organised, and product and service information is accurate and readily available to clients.</p> <p>3.4. Marketing activities are implemented within budgetary constraints to meet legal, ethical and enterprise requirements.</p>
4. Evaluate marketing performance	<p>4.1. Product, pricing and distribution policies are monitored in relation to market changes, marketing objectives and enterprise requirements.</p> <p>4.2. Areas of positive performance are identified and corrective action is taken to remedy poor performance areas.</p> <p>4.3. An objective assessment of the marketing plan and implementation is made by a comparison of valid and reliable data against performance targets.</p> <p>4.4. Relevant information is documented for continual analysis and effective planning management.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analyse with regard to market research and assessments
- manage information
- assess financial strategies and prepare budgets
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE
<ul style="list-style-type: none"> • price risk management • performance evaluation measures • competitors strengths and weaknesses • business planning process • customer relations policies • market conditions and forces • enterprise goals, objectives and directions • markets and market analysis • communication and promotion skills • marketing principles and practice • principles of trend analysis.

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • collect, analyse and present data in the internal and external business environment • assess alternative marketing strategies and techniques to meet business plan objectives • plan and implement a marketing strategy • monitor product, pricing and distribution policies to improve market performance.
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Markets may include:	<ul style="list-style-type: none"> • wholesalers • retailers • exporters • local, national and/or international customers • private and public sector organisations and enterprises.
Marketing strategies may include:	<ul style="list-style-type: none"> • various information with regard to: <ul style="list-style-type: none"> • pricing • promotion • product quality • service standards • distribution channels.

Unit Sector(s)

Unit sector	Business
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCARB204A Undertake standard climbing techniques

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of climbing small trees with ropes and harness for the purpose of pruning and defines the standard required to: carry out pre-operational and safety checks; identify and report site and tree hazards and implement risk controls; select, prepare and inspect ropes, harnesses and other equipment associated with climbing trees; safely climb/ascend and descend a tree with rope and harness; climb using documented low risk work methods; inspect for faults and store ropes, harnesses and other climbing and safety equipment and record and replace if worn or faulty.
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Application of the Unit

Application of the unit	This unit applies to the basic techniques used to climb trees in Arboriculture and applies to a climbing tree worker. This standard involves working under routine supervision with intermittent checking by supervisors or qualified arborists. Climbing techniques follow documented low risk work methods and procedures.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for climbing operations	<p>1.1.Climbing instructions and methods are determined according to enterprise Standard Operating Procedures (SOPs).</p> <p>1.2.Hazards associated with the climb are identified and reported to the supervisor.</p> <p>1.3.Climbing tools and equipment are selected, prepared and used according to supervisor's instructions and manufacturer's guidelines.</p>
2. Tie knots required for tree climbing operations	<p>2.1.Ropes specific to the task are selected and inspected for wear, damage and soundness.</p> <p>2.2.Industry recognised knots are used in accordance with the required application.</p> <p>2.3.All knots are checked on completion in accordance with established workplace practice.</p>
3. Climb trees in a low hazard work environment	<p>3.1.Personal Protective Equipment (PPE) and safety equipment is selected, maintained and used according to enterprise procedures.</p> <p>3.2.Climbing is undertaken using standard industry methods, enterprise SOPs and according to Occupational Health and Safety (OHS) requirements.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and report risks
- select and prepare climbing tools and equipment
- select and inspect ropes
- use industry recognised knots
- climb trees and use ropes
- estimate tree heights and loads
- interpret supervisors directions and communicate with fellow team members
- minimise noise, dust, and high activity vehicle traffic to prevent nuisance-level environmental disturbance
- follow guidelines, instructions and supervision
- participate and contribute to team objectives
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- basic climbing principles and preparation procedures
- basic climbing techniques and planning
- safe working limit of ropes
- safe work practices relevant to tree climbing activities
- tree anatomy and physiology
- local government tree protection and preservation regulations
- AS4373-2007 Pruning of amenity trees
- relevant Code of Practice.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • carry out pre-operational and safety checks • identify and report site and tree hazards, and implement risk controls • select, prepare and inspect ropes, harnesses and other equipment associated with climbing trees • safely climb/ascend and descend a tree with rope and harness • climb using documented low risk work methods • inspect for faults and store ropes, harnesses and other climbing and safety equipment and record and replace if worn or faulty.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> • all species of trees and woody tree like vegetation forms where trees are healthy, free from decay, disease and pests, and are free from embedded objects such as wire, nails or spikes and are NOT prone to branch failure.

RANGE STATEMENT

Knots may include knots such as:

- bowline
- bowline on a bight
- tautline
- prussik
- figure 8
- clove hitch
- half hitch.

Unit Sector(s)

Unit sector	Arboriculture
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCARB206A Undertake stump removal

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of removing tree stumps from the ground with the aid of motorised stump grinders and defines the standard required to: conduct pre-operational and safety checks on machinery and equipment; perform hazard identification and risk control procedures; inspect the work area to determine method of removal using the risk controls; select and safely use a range of stump removal machinery and equipment; perform operational maintenance on stump removal machinery and equipment.
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Application of the Unit

Application of the unit	This unit applies to the mechanical removal of tree stumps using a stump grinding machine.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for stump removal operations	<p>1.1.Site location and details regarding the removal of stumps is collected and interpreted.</p> <p>1.2.All underground services are located according to supply authorities' guidelines.</p> <p>1.3.Tools and equipment are selected according to supervisor's instructions and manufacturer's guidelines.</p> <p>1.4.Site and work zone hazards are identified and recorded, risk level established, and controls checked against the safety plan or safe work method statement.</p> <p>1.5.Suitable Personal Protective Equipment (PPE) is selected, used and maintained such as safety glasses for eye protection.</p>
2. Undertake removal operations	<p>2.1.Pre-operational and safety checks are carried out on stump removing tools and equipment, according to documented guidelines.</p> <p>2.2.Tools and equipment appropriate to the task being undertaken are used according to documented Occupational Health and Safety (OHS) requirements and to manufacturer's specifications.</p> <p>2.3.Stump is removed to agreed depth and spread without damage to underground services and surrounding areas.</p> <p>2.4.Stump hole is back-filled and consolidated to original ground level according to enterprise policy.</p>
3. Complete stump	<p>3.1.Waste material is collected and disposed of and/or recycled in a manner that causes minimal damage to</p>

ELEMENT	PERFORMANCE CRITERIA
removal operation	<p>the environment.</p> <p>3.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and enterprise guidelines.</p> <p>3.3. A clean and safe work area is maintained throughout and upon completion of work according to enterprise Standard Operating Procedures (SOPs).</p> <p>3.4. Relevant records are maintained according to enterprise guidelines.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- conduct pre-operational and safety checks on machinery and equipment
- perform hazard identification and risk control procedures
- inspect the work area to determine method of removal using the risk controls
- select and safely use a range of stump removal machinery and equipment
- perform operational maintenance on stump removal machinery and equipment
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- manufacturer guidelines for operating stump grinding machinery
- environmental implications of removal activities including run off, drainage, salinity and soil erosion, and soil disturbance
- removal practices associated with different soil types
- the effect of adverse outdoor climatic conditions.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • transport stump removal equipment to and from a work site • safety glasses must be worn as well as other appropriate personal protective equipment (PPE) • inspect a job to determine appropriate removal techniques • select and safely use a range of stump removal machinery and equipment • perform operational maintenance on stump removal machinery and equipment.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> • all species of trees and woody tree like vegetation forms.
Machinery may include:	<ul style="list-style-type: none"> • all machinery and equipment used in commercial stump removal.

Unit Sector(s)

Unit sector	Arboriculture
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCARB307A Undertake complex tree climbing

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers tree climbing and rigging associated with tree operations such as tree pruning and tree removal in complex situations and defines the standard required to: carry out and record pre-operational and safety checks; conduct a site and tree hazard identification and risk control assessment; inspect a tree and determine safest and best work method using risk controls established; select, inspect and prepare ropes, harnesses and other equipment associated with climbing trees; safely climb/ascend and descend large, hazardous and complex trees using a number of anchor points; climb using documented low risk work methods; inspect for faults and store ropes, harnesses and other climbing and safety equipment and replace if worn or faulty; practice an aerial rescue and document the hazards identified and the risk controls selected.
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Application of the Unit

Application of the unit	This unit applies to advanced techniques used to climb trees in arboriculture and applies to a climbing arborist.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	
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Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for climbing and tree operations	1.1. Team members are informed of their role and duties in the climbing and tree operations. 1.2. Ropes are selected according to industry specifications and required tree works. 1.3. Ropes are assessed prior to use with damaged and faulty ropes discarded according to enterprise policy. 1.4. Appropriate climbing tools and equipment are selected. 1.5. Ropes, tools and equipment are checked. 1.6. Tree is inspected for safe ascension route.
2. Ascend and descend from trees	2.1. Occupational Health and Safety (OHS) hazards are identified risks assessed and appropriate controls are documented and implemented. 2.2. Personal protective and safety equipment is used and adjusted. 2.3. Trees are ascended using appropriate techniques and equipment. 2.4. Safe anchor points are selected according to strength

ELEMENT	PERFORMANCE CRITERIA
	<p>and suitability requirements.</p> <p>2.5. Tree is descended in a controlled manner according to industry practice.</p>
3. Undertake tree operations	<p>3.1. Required tree operations are carried out according to treatment plans, work procedures and rigging techniques.</p> <p>3.2. Load is balanced, tensioned and lowered in a staged controlled manner using appropriate crane points according to safe work practices, branch weight and rope characteristics.</p> <p>3.3. Staff are communicated with during operations, as required, verbally and by hand signals.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- climb trees and use twin ropes
- select and inspect appropriate equipment
- select and tie a wide range of knots
- select low risk anchor points
- apply a range of tree treatments
- attach and use rigging equipment
- balance and tension a load
- operate chainsaws and pole-saws
- perform aerial rescue techniques
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- identification of tree species and their pruning requirements
- tree pruning techniques appropriate to the pruning requirements of the species
- tree morphology, physiology and Compartmentalisation of Decay in Trees (CODIT) principles
- advanced tree climbing practices and principles including the use of Personal Protective Equipment (PPE) and secondary attachments
- types, uses and safe working limit of ropes and all other equipment
- impact of force under normal/failure conditions
- capability of lifting and lowering equipment
- Safe Working Loads (SWL) relationship between Breaking Strength (BS), Safety Factor (SF), Working Load Limit (WLL) and Cycles to Failure (CTF)
- awareness of power line clearances
- first aid and rescue procedures applicable to tree work
- industry codes of practice
- a broad range of trees and treatments
- advanced chainsaw techniques
- local government tree protection and preservation regulations
- AS4373-2007 Pruning of amenity trees
- relevant Code of Practice.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out and record pre-operational and safety checks
- conduct a site and tree hazard identification and risk

EVIDENCE GUIDE	
	<p>control assessment</p> <ul style="list-style-type: none"> inspect a tree and determine safest and best work method using risk controls established select, inspect and prepare ropes, harnesses and other equipment associated with climbing trees safely climb, ascend and descend large, hazardous and complex trees using a number of anchor points climb using documented safe work methods inspect for faults and store ropes, harnesses and other climbing and safety equipment and replace if worn or faulty. document the hazards identified and the risk controls selected.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Situations may include:	<ul style="list-style-type: none"> complex tree climbing incorporates situations made hazardous by tree branches vulnerable to failure under a load trees affected by decay, disease and/or pests, trees with embedded objects such as wire, nails or spikes proximity of power lines adjacent property or intruding branches the tree's height, size, trunk characteristics, shape and weight distribution of the crown may contribute to making conditions hazardous to a climber or a felling or trimming operation inclement weather may also contribute to making working conditions difficult and hazardous.

RANGE STATEMENT	
Climbing tools and equipment may include:	<ul style="list-style-type: none"> • ropes • safety harnesses • ascending and descending devices • ladders • safety equipment (helmets, ear and eye protection, gloves, boots, etc.) • pulleys and blocks • shackles and karabiners.

Unit Sector(s)

Unit sector	Arboriculture
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCCHM201A Apply chemicals under supervision

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of applying chemicals under supervision using handheld or small powered equipment, and defines the standard required to: apply chemicals using handheld or small powered equipment; check, prepare, use and maintain application equipment and personal protective equipment; measure, mix, transport, handle store and dispose of chemicals and comply with Occupational Health and Safety (OHS), chemical label and Material Safety Data Sheets (MSDSs) requirements.
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Application of the Unit

Application of the unit	This unit applies to working under supervision with reference to the product label, legislation and enterprise procedures. This unit may be deemed to have a time limit when used as part of an accreditation or licence process.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Check application and personal protective equipment	<p>1.1. Carry out pre-operational checks of application equipment in accordance with manufacturer's specification and OHS requirements.</p> <p>1.2. Prepare application equipment for use in accordance with manufacturer's specification and directions.</p> <p>1.3. Identify and replace any damaged or worn components.</p> <p>1.4. Check personal protective equipment in accordance with manufacturer's specification and OHS requirements.</p>
2. Prepare application equipment	<p>2.1. Apply label information regarding precautions for the chemical mix/substance being used.</p> <p>2.2. Select and use appropriate personal protective and mixing equipment in accordance with MSDSs and chemical label.</p> <p>2.3. Measure, mix and load chemical mix or substances in accordance with directions on chemical label.</p> <p>2.4. Follow legislative and regulatory requirements regarding chemical use including OHS.</p> <p>2.5. Confirm instructions from chemical MSDSs in the event of a spill.</p> <p>2.6. Check that output of application equipment is correct and in accordance with application/spray plan.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Apply chemicals	3.1. Assess and record meteorological conditions and forecasts prior to and during application. 3.2. Select and use appropriate personal protective equipment in accordance with MSDSs and chemical label. 3.3. Apply chemical in accordance with the application/spray plan and/or instructions. 3.4. Assess and minimise risks to others, product integrity and the environment prior to and during application.
4. Finalise work	4.1. Clean and store Personal Protective Equipment (PPE) and application equipment in accordance with manufacturer's specification and OHS requirements. 4.2. Dispose of excess chemicals and use triple rinse drums in accordance with label and MSDSs requirements. 4.3. Complete incident reports as required in accordance with legislative and/or regulatory requirements. 4.4. Complete application records. 4.5. Store unused chemical/products in accordance with label requirements and MSDSs. 4.6. Adhere to all re-entry and withholding periods.
5. Transport and handle chemical	5.1. Confirm precautions for the transport and handling of chemicals. 5.2. Transport and handle chemicals in accordance with legislative and/or regulatory requirements.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and adopt safe work practices
- conduct pre-operational checks of application equipment
- use and maintain personal protective equipment
- measure, mix and load chemical mixes

REQUIRED SKILLS AND KNOWLEDGE

- use hand held and small powered application equipment relevant to the industry sector using safe and environmentally responsible work practices
- interpret labels, record relevant information and measure application amounts
- follow chemical label requirements and application/spray plan
- record activities and maintain records
- transport and handling techniques
- respond to emergencies and apply first aid in the event of pesticide poisoning
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- applied principles of Integrated Pest/Resistance Management
- structure of chemical label and MSDS
- types, applications, storage and fitting of personal protective equipment
- legislation and regulations including OHS and licensing requirements in relation to chemical use
- features and functions of a range of application equipment relevant to the industry sector
- risk factors including human and animal health, spillage and environmental
- principles of transport, handling and storage for chemicals
- requirements for disposal of excess chemicals, clearing spillages and equipment clean up
- transport and handling requirements
- environmental effects of selected chemicals and how to minimise damaging effects of chemicals
- different broad chemical types, eg, insecticides, herbicides and fungicides and their mode of action symbols on the label
- paths of entry of poisons into the body and methods of limiting exposure
- methods of minimising risk during application
- Regulations and Codes of Practices with regard to hazardous substances of the use of chemicals
- OHS concerning personal safety and safety of others in the workplace
- alternatives to chemicals for pest management
- possible effects on health of bystanders/public in addition to applicators
- weather conditions and means of assessing them in line with risks, and recognising when they become unsuitable for application to continue.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • apply chemicals using handheld or small powered equipment • check, prepare, use and maintain application equipment and personal protective equipment • measure, mix, transport, handle store and dispose of chemicals • comply with OHS, chemical label and MSDSs requirements.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Chemicals may include:	<ul style="list-style-type: none"> • the application of liquid chemical mixes • granular products • and/or biological agents used in the control of pest, weeds and diseases including animal health products.

Unit Sector(s)

Unit sector	Chemicals
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCCHM303A Prepare and apply chemicals

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of preparing and applying chemicals and defines the standard required to: assess the need for chemical use: comply with safety, chemical label and MSDS requirements; prepare an application/spray plan; prepare and apply chemicals; calibrate application equipment and maintain chemical records.
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Application of the Unit

Application of the unit	<p>This unit covers the preparation and application of liquid chemical mixes and/or granular products for the control of weeds, pests and diseases across a range of industry sectors.</p> <p>This unit may be deemed to have a time limit when used as part of an accreditation or licence process.</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine the need for chemical use	1.1.Nature and level of the pest, weed infestation or disease is identified. 1.2.Need for control is assessed. 1.3.The requirement for chemical use as an option within an integrated pest management strategy is assessed. 1.4.Hazard and risk analysis of different chemical options is undertaken. 1.5.Requirement for chemical application is identified and confirmed.
2. Prepare application/spray plan	2.1.Mixing rates for chemical is defined and calculated. 2.2.Application equipment type and set up requirements are determined for intended application. 2.3.The quantity of mix required is determined. 2.4.Meteorological conditions and forecasts prior to and during application are accessed. 2.5.An application/spray plan is completed. 2.6.Notify neighbours as required in accordance with industry practice or regulatory requirements

ELEMENT	PERFORMANCE CRITERIA
3. Prepare chemical mixes	<p>3.1. Requirements from chemical labels and Material Safety Data Sheets (MSDSs) are interpreted and applied.</p> <p>3.2. Appropriate first aid supplies are at hand.</p> <p>3.3. Appropriate personal protective and mixing equipment is selected and used in accordance with MSDSs and chemical label.</p> <p>3.4. A suitable location for mixing and loading is selected.</p> <p>3.5. Chemicals are prepared in accordance with registered use.</p> <p>3.6. MSDSs are followed in the event of a spill.</p>
4. Calibrate application equipment	<p>4.1. Pre-operational checks of application equipment are carried out.</p> <p>4.2. Equipment is calibrated in accordance with manufacturer specifications and application/spray plan.</p> <p>4.3. Calibration is checked for conformity to the requirements of the application/spray plan.</p> <p>4.4. Chemical is loaded wearing appropriate Personal Protective Equipment (PPE) and controlling risks to human health and the environment.</p>
5. Apply chemicals	<p>5.1. Appropriate personnel protective equipment is selected and used in accordance with MSDSs and chemical label.</p> <p>5.2. Chemical is applied in accordance with the application/spray plan and/or instructions and legislative and/or regulatory requirements.</p> <p>5.3. Risks to others, product integrity and the environment are assessed and minimised.</p>
6. Clean up equipment and complete records	<p>6.1. Excess chemical is disposed of in accordance with label and MSDSs requirements.</p> <p>6.2. Application equipment is cleaned and decontaminated.</p> <p>6.3. Requirements for the disposal of unused chemical, containers spilled materials are determined and implemented</p> <p>6.4. PPE and mixing equipment is cleaned and stored.</p> <p>6.5. Incidents are reported as required in accordance with legislative and/or regulatory requirements.</p> <p>6.6. All records, e.g. calibration, application, DG/hazard</p>

ELEMENT	PERFORMANCE CRITERIA
	substances, risk assessments, are completed in accordance with legislative, industry and enterprise requirements.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and implement risk control procedures
- identify appropriate treatment for pest, disease or weed
- mix and load chemicals
- conduct pre-operational checks of application equipment
- calibrate handheld and/or powered application equipment relevant to the industry sector
- interpret and apply chemical label requirements in the preparation of an application/spray plan
- apply chemicals
- use and maintain PPE
- dispose of surplus chemical and containers
- record activities and maintain records
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- options for pest control based on Integrated Pest/Resistance Management principles
- plant, pest, weed and/or diseases relative to industry sector
- chemical label and MSDSs formats
- meteorological and other conditions and impacts on safe and effective chemical

REQUIRED SKILLS AND KNOWLEDGE

application

- types and application of personal protective equipment
- features, functions and calibration techniques for a range of hand held and/or powered application equipment relevant to the industry sector
- risk factors including human and animal health, weather, spray drift, spillage and environmental
- spray nozzle identification, selection, operation and use
- chemical mix including mixing order, adjuvants, water quality, efficacy etc
- application techniques for a range of equipment types
- requirements for disposal of excess chemicals, clearing spillages and equipment clean up
- legislation including Occupational Health and Safety (OHS) and environment, and licensing requirements, in relation to chemical use.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess the need for chemical use
- comply with safety, chemical label and MSDSs requirements
- prepare an application/spray plan
- prepare and apply chemicals
- calibrate application equipment
- maintain chemical records

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

EVIDENCE GUIDE

	enterprise circumstances.
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Chemical types may include:

- all types of chemical mixes used in the control of pests, weeds and diseases including animal health products.

This unit does not cover:

- operation of specialised equipment and machinery transport
- handling and storage of chemicals set up of advanced operation
- specialised on-board control equipment.

Unit Sector(s)

Unit sector	Chemicals
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCCHM304A Transport, handle and store chemicals

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of transporting, handling and storing chemicals safely and identifies the standard required to: correctly maintain and use personal protective equipment (PPE) according to label; follow emergency procedures for chemical spillage; follow legislative requirements for the safe transport of chemicals; and maintain storage area and chemical manifest.
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Application of the Unit

Application of the unit	This unit applies to the safe transport, handling and storage of liquid and dry chemical formulations across a range of industry sectors. The work is likely to be carried out unsupervised. Responsibility for and limited organisation of the work of others may be involved. This unit may be deemed to have a time limit when used as part of an accreditation or licensing process.
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Licensing/Regulatory Information

Refer to Application of the Unit

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Transport and handle chemicals and biological agents	<p>1.1. Transport requirements are identified and followed from legislative and regulatory requirements, including Occupational Health and Safety (OHS).</p> <p>1.2. Risks involved in the transport and handling of chemical and biological agents are assessed and minimised.</p> <p>1.3. Containers are confirmed as being in a sound condition to transport.</p> <p>1.4. PPE is used as required according to manufacturer specifications and OHS requirements.</p> <p>1.5. Instructions from chemical material safety data sheets (MSDS) are followed in the event of a spill.</p> <p>1.6. Transport incidents are reported as required according to legislative and/or regulatory requirements.</p> <p>1.7. Appropriate first aid kit and spill kit are confirmed as being on hand for all stages of transport, handling and storage.</p>
2. Store chemicals in the workplace	<p>2.1. Appropriate storage methods are used according to chemical labels, MSDS, and/or legislative and regulatory requirements.</p> <p>2.2. Risks involved in storage of chemical and biological agents are assessed and minimised.</p> <p>2.3. Storage area is maintained according to legislative</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and regulatory requirements, including OHS and environmental protection.</p> <p>2.4. Products are retained in original containers with labels intact.</p> <p>2.5. Storage methods are utilised to prevent contact with people or animals, contamination of produce or the environment.</p> <p>2.6. Correct disposal procedures are applied for used chemical drums and storage containers.</p> <p>2.7. Unwanted and/or out-of-date chemicals are disposed of according to legislative and/or regulatory requirements and industry programs.</p>
3. Record storage details	<p>3.1. Chemical storage inventory and records are maintained according to legislative and regulatory requirements, including OHS.</p> <p>3.2. Storage incidents are reported as required according to legislative and/or regulatory requirements.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- transport, handle and store chemicals safely
- follow chemical label and MSDS requirements for transport handling and storage
- maintain records
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- transport handling and storage requirements on chemical labels and MSDS
- types and application of PPE used in transport and handling
- legislation and regulations, including OHS and licensing requirements in relation to chemical storage and transport
- risk factors, including human, animal health and environmental associated with transport, handling and storage
- requirements for disposal of excess, unwanted and/or out-of-date chemicals
- requirements for disposal of used chemical containers and/or drums
- processes for clearing spillages and clean up.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- transporting, handling and storing chemicals safely
- identify the standard required to correctly maintain and use PPE according to label
- follow emergency procedures for chemical spillage
- follow legislative requirements for the safe transport of chemicals
- maintain storage area and chemical manifest.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Chemicals handling may include:	<ul style="list-style-type: none"> requirements for the safe transport, handling and storage of chemicals and products used in the control of pest, weeds and diseases, including animal health products.
This unit does not cover:	<ul style="list-style-type: none"> operation of specialised chemical application equipment and machinery, application of chemicals. See separate units of competency under the appropriate category.

Unit Sector(s)

Unit sector	Chemicals
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCCHM401A Minimise risks in the use of chemicals

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers minimising risks in the use of chemicals and defines the standard required to: implement, monitor and evaluate a chemical risk control strategy; identify potential hazards and assess risks; develop risk control procedures; and monitor and evaluate the risk control strategy.
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Application of the Unit

Application of the unit	This unit applies to those whose job role include the assessment and mitigation of risks associated with the use of chemicals across a range of industry sectors. This unit may be deemed to have a time limit when used as part of an accreditation or licence process.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hazards and risks	<p>1.1.Guidelines, legislation, regulations and industry requirements relating to chemical use are identified and sourced.</p> <p>1.2.Hazards involved in chemical handling and application are identified.</p>
2. Assess risks and develop control procedures	<p>2.1.Risks associated with chemicals used are assessed.</p> <p>2.2.Risk control measures and emergency action plans are developed.</p> <p>2.3.Control procedures are developed for transport, handling, storage, application, decontamination and disposal.</p> <p>2.4.A continuous improvement strategy is developed to minimise risk.</p>
3. Implement and monitor adherence to chemical risk procedures	<p>3.1.Appropriate personal protective equipment (PPE) is provided for people in the workplace using chemicals.</p> <p>3.2.Select application equipment is selected according to procedures.</p> <p>3.3.Restrictions on chemical use, application, decontamination and disposal are followed according to procedures.</p> <p>3.4.Risk control procedures are followed in the workplace.</p>
4. Evaluate risk control measures and maintain record	<p>4.1.Procedures for evaluating the effectiveness of risk control measures are developed.</p> <p>4.2.Shortfalls identified during evaluation are addressed and rectified.</p>

ELEMENT	PERFORMANCE CRITERIA
	4.3. Risk assessment records are maintained according to industry, label, legislative and regulatory requirements.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- develop procedures
- evaluate implementation
- identify hazards, assess risks, and implement and monitor risk control procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- sources of information relating to chemical use, including:
 - guidelines
 - legislation and regulations
 - industry requirements
- hazard identification and risk assessment strategies
- risk factors, including human and animal health, product integrity, weather, spray drift, spillage and environmental
- principles of transport, handling and storage for chemicals
- requirements for disposal of excess chemicals, clearing spillages and equipment clean up
- chemical application equipment capabilities and limitations.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • implement, monitor and evaluate a chemical risk control strategy • identify potential hazards and assess risks • develop risk control procedures • monitor and evaluate the risk control strategy.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Agricultural chemicals include:	<ul style="list-style-type: none"> • insecticides • fungicides • herbicides • bactericides • algaecides • biologicals • nematocides • rodenticides

RANGE STATEMENT

	<ul style="list-style-type: none">• antimicrobial agents• anthelmintics• fumigants• hormone growth promotants• a range of veterinary chemicals used to treat animals for disease.
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Unit Sector(s)

Unit sector	Chemicals
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCCHM402A Plan and implement a chemical use program

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the planning and implementation of a chemical use program and defines the standard required to: plan and implement a program for chemical use; supervise others in chemical use; apply and monitor risk control procedures; select and manage chemical application equipment and processes.
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Application of the Unit

Application of the unit	This unit applies those whose job role includes the development and implementation a chemical use program for pesticides use. This unit may be deemed to have a time limit when used as part of an accreditation or licence process.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop and document an application/spray plan	1.1. Assess risks associated with proposed control strategy. 1.2. Select preferred control procedures. 1.3. Document preferred control procedures as application/spray plan.
2. Identify requirements for chemical use	2.1. Identify and interpret guidelines, legislation and regulations and industry requirements relating to chemical use. 2.2. Assess the need for chemical use as an option within an integrated pest management and/or animal health strategy. 2.3. Ensure that personnel are adequately trained in chemical use.
3. Ensure that risk control measures are followed	3.1. Provide appropriate Personal Protective Equipment for people in the workplace using chemicals. 3.2. Monitor the implementation of safe practice in the workplace including preparation and application of chemicals. 3.3. Monitor implementation of procedures for transport, handling, storage, decontamination and disposal. 3.4. Monitor implementation of procedures to mitigate residues in produce and the environment.
4. Plan and implement a maintenance program for chemical use equipment	4.1. Develop and implement a maintenance strategy for application equipment and personal protective equipment. 4.2. Monitor implementation of maintenance procedures.

ELEMENT	PERFORMANCE CRITERIA
	4.3.Ensure that faulty or damaged equipment is repaired or replaced.
5. Ensure the correct selection and application of chemicals	5.1.Ensure that the correct chemicals and equipment is selected in accordance with the application/spray plan. 5.2.Ensure that pre-operational checks of application equipment are carried out. 5.3.Check to ensure that calibration conforms to the requirement of the application/spray plan. 5.4.Ensure that meteorological conditions are monitored and assessed during application where relevant. 5.5.Monitor the application procedures in the event of a chemical spill.
6. Ensure work activities are finalised in accordance with procedure	6.1.Ensure that excess chemical are disposed of in accordance with label and Material Safety Data Sheet requirements. 6.2.Ensure incident reports are completed as required in accordance with legislative and/or regulatory requirements. 6.3.Ensure all required records are completed.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- develop strategies to monitor the implementation of procedures
- evaluate conformance with procedures
- identify hazards and oversee the safety of the working environment
- develop and document an application/spray plan
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex

REQUIRED SKILLS AND KNOWLEDGE

workplace measures and data

- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- sources of information relating to chemical use including:
 - guidelines
 - legislation and regulations
 - industry requirements
 - hazard identification and risk assessment strategies
 - methodologies for the development of procedures
 - risk factors including human and animal health, weather, spray drift, spillage, residue, product integrity and environmental
 - transport, handling and storage for chemicals
 - requirements for disposal of excess chemicals, clearing spillages and equipment clean up
 - OHS, environmental and pesticides legislation, codes of practice and enterprise procedures.
 - chemical application equipment capabilities and limitations.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- plan and implement a program for chemical use
- supervise others in chemical use
- apply and monitor risk control procedures
- select and manage chemical application equipment

EVIDENCE GUIDE	
	and processes.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Agricultural chemicals include:	<ul style="list-style-type: none"> • insecticides • fungicides • herbicides • bactericides • algaecides • biologicals • nematocides • rodenticides • antimicrobial agents • anthelmintics • fumigants • hormone growth promotants • a range of veterinary chemicals used to treat animals for disease. <p>It does not cover the development of general chemical use procedures.</p>

Unit Sector(s)

Unit sector	Chemicals
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCEXP303A Prepare and use explosives

Modification History

Not Applicable

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit covers carrying out explosive procedures including preparation, mixing, detonation and clean up safely in the field and defines the standard required to: obtain the appropriate permits and licenses for blasting; inform neighbours and post notices for blasting; prepare the blast site to place the explosive; prepare explosives and the initiator device according to best safety practice and regulations; place and fire charges according to best safety practice and regulations; conduct post-firing procedures for misfires; site checks; the disposal of surplus, unserviceable and defective explosives; recording procedures.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>The preparation and use of explosives is likely to be under limited supervision with checking related to overall progress. Responsibility for the notification of others, and the duty of care for their safety, is also involved.</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

<p>Prerequisite units</p>		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for blasting	1.1. Permits/ licences are obtained and approved warning signs installed and prominently displayed according to legislative requirements. 1.2. Property manager and relevant controlling authorities are notified of blasting plans and timing as required by legislation. 1.3. The area where the charges are to be used is cleared of stones and other potential missiles. 1.4. The blast site is cleared and made safe prior to charges being placed. 1.5. All explosive products are placed at the required safety distance from any identified hazards. 1.6. Appropriate holes are drilled/dug to place the charge(s) in line with blasting plans. 1.7. Drilling/digging equipment is removed to the prescribed safe distance in accordance with Australian Standards, Acts and Regulations. 1.8. Neighbours and members of the public likely to be concerned or disturbed by shock effects are advised of the blasting program.

ELEMENT	PERFORMANCE CRITERIA
2. Prepare explosives	<p>2.1. Quantities of explosives components required are calculated to match the application and prevailing conditions.</p> <p>2.2. Required explosives are assembled on site, or an explosives mix (of homogenous composition) is calculated precisely to ensure minimum residual mix to be destroyed, and is prepared in accordance with defined requirements.</p> <p>2.3. Required fusing and detonating components are assembled to match the established explosive requirements in preparation for blasting.</p>
3. Place charges	<p>3.1. Explosives elements are placed in holes or packed using safe working procedures and methods and in accordance with Australian Standards, Acts and Regulations.</p> <p>3.2. All holes are stemmed and tamped prior to the attachment of the firing system to maximise safety to all personnel and the efficiency of the blasting.</p> <p>3.3. Electrical firing circuits or fire fuses are checked for continuity and/or earthing as required.</p> <p>3.4. All extraneous materials are cleared from the site to safe distances in accordance with enterprise standards.</p> <p>3.5. Routine re-checks of the site and surrounds are performed to ensure that no non-essential personnel are endangered.</p> <p>3.6. Blasting mats or other control devices are placed as appropriate according to the blasting plan.</p> <p>3.7. Blast area is guarded according to legislative requirements and enterprise practices.</p>
4. Fire charges	<p>4.1. Prescribed warning notification procedures are carried out in accordance with enterprise and industry standards.</p> <p>4.2. The blasting site is re-checked to ensure correct placement of explosives and ensure that all safety procedures have been implemented according to supervisor or shot firer's instructions.</p> <p>4.3. Warning signals including audible and visual signals are issued to ensure that the site is clear.</p> <p>4.4. Firing procedures are initiated through manual or electric firing systems.</p>
5. Conduct post-firing	<p>5.1. Charges are counted as they fire or are inspected</p>

ELEMENT	PERFORMANCE CRITERIA
procedures	<p>safely post blasting to ensure that misfires are readily identified prior to all clear signals being given.</p> <p>5.2. Misfire procedures are implemented after prescribed timing and/or practice drills conducted using water jets or additional charges in accordance with Australian Standards, Acts and Regulations.</p> <p>5.3. Site checks are carried out to ensure that the site is safe and the all-clear signal is given in line with industry practice and legislative requirements.</p> <p>5.4. Surplus, unserviceable and defective explosives and detonators are destroyed or discarded or stored in line with prescribed procedures and in consideration of the environmental impact.</p> <p>5.5. Accurate records are completed and kept in line with enterprise and legislative requirements.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- use explosives safely and effectively according to enterprise requirements
- dispose of surplus, defective or unwanted detonators or explosives safely
- correctly and uniformly mix explosives components
- apply the regulations relating to explosives use according to enterprise requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- fire precautions and prevention procedures

<p>REQUIRED SKILLS AND KNOWLEDGE</p> <ul style="list-style-type: none"> • appropriate explosives mixing procedures • the calculation of explosives quantities • explosives preparation, placement, firing and post firing procedures • the regulations relating to explosives use in the enterprise • relevant standards issued by Standards Association of Australia • related environmental issues and risks to livestock (including poisoning).

Evidence Guide

<p>EVIDENCE GUIDE</p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • obtain the appropriate permits and licenses for blasting • inform neighbours and post notices for blasting • prepare the blast site to place the explosive • prepare explosives and the initiator device according to best safety practice and regulations • place and fire charges according to best safety practice and regulations • conduct post-firing procedures for misfires, site checks, the disposal of surplus, unserviceable and defective explosives, and recording procedures.
<p>Context of and specific resources for assessment</p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Requirements and scope may include:

- the Australian Standard relating to preparing and using explosives (AS 2187, Part 2 1993) which includes:
 - operations prior to charging
 - charging
 - preparation for firing
 - firing
 - misfires
 - preparation of primers.

Unit Sector(s)

Unit sector

Explosives

Co-requisite units

Co-requisite units

Competency field

Competency field

AHC FIR201A Assist with prescribed burning

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of assisting with prescribed burning for agricultural or natural resource purposes and defines the standard required to: prepare machinery and equipment before burning; undertake burn operations and monitor weather conditions; use Personal Protective Equipment (PPE) as required and check, clean and store on completion of the burn; carry out clean up operations and monitor the site.
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Application of the Unit

Application of the unit	This unit applies to working under close supervision with constant checking. Responsibility for some roles and coordination within a team may be required.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assist with preparations for the burn	<p>1.1. Machinery and equipment to be used in the burn are prepared for use as directed.</p> <p>1.2. Safety equipment is checked and prepared for use.</p> <p>1.3. Information about contingency plans is read or listened to and clarification sought where required.</p> <p>1.4. Assets requiring protection during the burn are recognised and noted.</p> <p>1.5. Personal role and activities during the burn are checked with supervisor.</p> <p>1.6. Location and extent of the burn is discussed and clarified with the supervisor.</p>
2. Support conduct of burn	<p>2.1. Assistance with pre-burn checks is provided as directed by the supervisor.</p> <p>2.2. Burn operations are undertaken in a safe manner.</p> <p>2.3. Problems or concerns during the burn are raised with the supervisor.</p> <p>2.4. Communication is maintained at all times in accordance with the organisation's procedures.</p> <p>2.5. Conditions at the fire are observed and their effect on fire behaviour and development are noted and reported to the supervisor.</p> <p>2.6. Weather conditions and changes to fire behaviour are observed and reported to the supervisor.</p> <p>2.7. A safe escape route is identified and maintained at all times.</p> <p>2.8. Personal protective equipment is fitted properly and worn throughout the burn.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Participate in clean-up activities	3.1. Cleaning-up activities are carried out under direction in accordance with the organisation's procedures. 3.2. Personal protective equipment is cleaned and returned to storage. 3.3. Machinery and equipment used in the burn are cleaned and returned to storage. 3.4. Cleaning and maintenance are carried out in accordance with the organisation's procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and adopt safe work practices
- assist with preparations for the burn
- support conduct of the burn
- monitor fire behaviour and risk
- participate in clean-up activities
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- fire behaviour
- extinguishing media and equipment
- burning tactics and techniques
- fire hazards, safety techniques
- organisations operating procedures
- OHS and environmental legislative and enterprise requirements.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • prepare machinery and equipment before burning • undertake burn operations and monitor weather conditions • use PPE as required and check, clean and store on completion of the burn • carry out clean up operations and monitor the site.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Prescribed burning may include:	<p>the burning of either agricultural or natural areas, impacting on a range of threatened areas including:</p> <ul style="list-style-type: none"> • buildings • utilities: <ul style="list-style-type: none"> • power and telephone lines • water supply structures • communications towers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • public lands • area of rare or sensitive flora and fauna • other crops • tree plantations • other property.

Unit Sector(s)

Unit sector	Natural area restoration
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCILM201A Maintain cultural places

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of maintaining cultural places as instructed by supervisors and defines the standard required to: assess the level of work required to maintain the cultural place; carry out maintenance activities in accordance with organisational and cultural requirements; report deterioration or damage to place; report incidents of breaches of legislation including vandalism.
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Application of the Unit

Application of the unit	This unit applies to working under routine supervision and may involve operating in a team environment with deference to elders. Note: For Indigenous cultural places, the delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess maintenance work required	1.1.Works required under the plan of management and enterprise procedures are identified. 1.2.Machine, equipment and materials to carry out maintenance works are identified. 1.3.Type and amount of materials required for maintenance work are estimated.
2. Prepare for maintenance	2.1.Machine, equipment and materials to carry out maintenance works are organised. 2.2.Safety equipment and materials are prepared and assembled according to enterprise Occupational Health and Safety (OHS) policy.
3. Maintain condition of place	3.1.Maintenance work is undertaken according to work programs and according supervisor's instructions. 3.2.Presence of threats is reported to supervisor. 3.3.Evidence of deterioration and wear is reported to supervisor. 3.4.Site is made good on completion of maintenance works according to supervisor's instructions enterprise guidelines.
4. Protect cultural place	4.1.Any evidence of damage to place is reported to supervisor. 4.2.Any breach of legislation or enterprise regulations is reported to supervisor.

ELEMENT	PERFORMANCE CRITERIA
	4.3. Protective barriers and signs are maintained according to enterprise procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and adopt safe work practices
- assess maintenance work required
- maintain condition of place
- protect cultural places
- prepare for maintenance
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- OHS responsibilities
- common pests and diseases
- techniques of site protection
- range of maintenance works undertaken on cultural sites
- enterprise procedures relating to the reporting of deterioration or damage to place or reporting of incidents
- site recording systems used by the enterprise or community
- relevant archaeological practices and procedures.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • assess the level of work required to maintain the cultural place • carry out maintenance activities in accordance with organisational and cultural requirements • report deterioration or damage to place • report incidents of breaches of legislation including vandalism.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Cultural places may include:	<ul style="list-style-type: none"> • areas of non-indigenous activity • buildings and other structures • natural areas of indigenous cultural significance, historical events and monuments • areas of indigenous activity such as burial, occupation and contact sites, engravings, grinding grooves, sacred trees, rock pictures, fish traps, middens and mounds.

Unit Sector(s)

Unit sector	Indigenous land management
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCILM401A Protect places of cultural significance

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the protection of places of cultural significance and defines the standard required to: develop working relationships with stakeholders in cultural sites; canvass views in determining the heritage value and preservation issues of a cultural site; plan for the protection of a cultural site including resources required and submissions to be completed; observe cultural protocols in dealing with stakeholders and land managers; identify threats and develop action and emergency plans to mitigate and manage the risk of damaging incidents or loss of heritage value; document the submissions to implement conservation and restoration activities and support the incident management activities.
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Application of the Unit

Application of the unit	This unit applies to those whose work includes protecting indigenous peoples' places of culture in co-operation with stakeholders and protecting places of cultural significance with reference to indigenous communities and/or line management. A high level of cultural awareness and the need to observe cultural protocols are important in parts of the process. Note: for indigenous cultural places, the delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Communicate with stakeholders	<p>1.1. Working relationships are developed with stakeholders that assist in the management of culturally significant places.</p> <p>1.2. Communication approaches are developed that accommodate cultural views.</p> <p>1.3. Views are regularly obtained on the way in which the cultural significance and resource can be conserved and used.</p> <p>1.4. Views obtained are conveyed into enterprise and park/reserve planning process.</p>
2. Conserve significance	<p>2.1. Enterprise conservation policies and plans are used with stakeholder views to plan ongoing conservation actions.</p> <p>2.2. Operational activities are developed and implemented to implement the conservation strategies and plans in a culturally sensitive manner.</p> <p>2.3. Staff are organised to implement conservation</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>actions that minimise deterioration and damage.</p> <p>2.4. Staff are supervised during restoration projects.</p> <p>2.5. Resources are obtained for conservation and restoration activities.</p> <p>2.6. Submissions are made to the enterprise budget process for funds to implement the conservation and restoration activities.</p>
3. Manage incident	<p>3.1. Operational plans are developed to manage incidents consistent with plan of management and risk management analysis.</p> <p>3.2. Staff responsibilities are assigned to manage types of incidents.</p> <p>3.3. Equipment and supplies are obtained and maintained to enable effective response to incidents.</p> <p>3.4. Staff are trained in the management of the types of incidents for which they have an involvement.</p> <p>3.5. Submissions are made to the enterprise budget process for funds to support the incident management activities.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- consult with indigenous communities
- observe cultural protocols
- plan ongoing conservation actions
- conserve significance of place of culture
- manage incidents and threats
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex

REQUIRED SKILLS AND KNOWLEDGE

workplace measures and data

- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- enterprise policies and procedures for conservation of places of cultural significance
- indigenous protocols, consultation processes and networks
- non-indigenous cultural groups
- budgetary and financial approval processes.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- develop working relationships with stakeholders in cultural sites
- canvass views in determining the heritage value and preservation issues of a cultural site
- plan for the protection of a cultural site including resources required and submissions to be completed
- observe cultural protocols in dealing with stakeholders and land managers
- identify threats and develop action and emergency plans to mitigate and manage the risk of damaging incidents or loss of heritage value
- document the submissions to implement conservation and restoration activities and support the incident

EVIDENCE GUIDE	
	management activities.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Cultural places may include:	<ul style="list-style-type: none"> • areas of non-indigenous activity • buildings and other structures • natural areas of indigenous cultural significance • historical events and monuments • areas of indigenous activity such as: <ul style="list-style-type: none"> • burial • occupation and contact sites • engravings • grinding grooves • rock pictures • fish traps • middens • mounds.

Unit Sector(s)

Unit sector	Indigenous land management
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCINF202A Install, maintain and repair fencing

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of installing, maintaining and repairing fencing and defines the standard required to: select the appropriate materials and tools; erect fence; install gates and components; assess the fencing site for environmental impacts of the fence; undertake repairs, record work activities and clean up the fencing site; remove and dispose of, or recycle waste.
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Application of the Unit

Application of the unit	This unit applies to workers in rural organisations who operate under limited supervision with checking only related to overall progress within established enterprise routines and procedures.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for fencing work	<p>1.1. Appropriate tools and materials are selected in accordance with task requirements, manufacturer's guidelines and fence design.</p> <p>1.2. Faulty or unsafe tools are identified and put aside for repair or replacement.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p> <p>1.4. Transport of fencing materials, tools and equipment to worksite is arranged.</p>
2. Undertake fence installation	<p>2.1. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>2.2. Posts and stays are installed and secured in accordance with industry practice.</p> <p>2.3. Wire is strung and tensioned in accordance with manufacturer's guidelines and industry practice.</p> <p>2.4. Wire netting or other fencing materials are attached in accordance with manufacturer's guidelines and industry practice.</p> <p>2.5. Gates are positioned and attached and checked for correct operation.</p>
3. Maintain and repair fencing	<p>3.1. Faults or structural damage are identified and necessary repairs are carried out in accordance with industry practice and manufacturer's guidelines.</p> <p>3.2. Dismantling operations are carried out recovering re-useable materials.</p> <p>3.3. Further maintenance or repair works are identified</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and reported.</p> <p>3.4. Used fencing material is packed for reuse or disposed of according to enterprise procedures.</p>
4. Complete fencing work	<p>4.1. Work area is cleared and tidied and all non re-useable materials are disposed of in an environmentally responsible manner.</p> <p>4.2. Tools, personal protective equipment and re-useable materials are cleaned and stored.</p> <p>4.3. Work activities are recorded in accordance with industry practice.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and follow safe work practices
- site fencing materials and tools for efficient use
- use fencing tools safely and in accordance with manufacturer's guidelines
- install fence posts and stays
- tension fencing wire and netting in accordance with manufacturers guidelines
- string, strain and tie off wires safely and efficiently
- use hand tools safely
- operate powered fencing machinery in a safe, efficient and controlled manner
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- designs and purpose of a range of conventional fencing
- wire types, knots, tensions applications and limitations
- common hazards involved in fencing installation, maintenance and repair

REQUIRED SKILLS AND KNOWLEDGE

- uses and types of fencing tools and equipment
- fencing materials manufacturers specifications and guidelines
- OHS and environmental legislation, codes of practice and enterprise procedures.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select the appropriate materials and tools
- erect fence, install gates and components
- assess the fencing site for environmental impacts of the fence
- undertake repairs
- record work activities
- clean up the fencing site and remove and dispose of, or recycle, waste.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement**RANGE STATEMENT**

RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Fences may include:

- post and wire
- wire netting.

Unit Sector(s)

Unit sector	Infrastructure
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCINF203A Maintain properties and structures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of maintaining and repairing properties and structures, in a situation that does not require the specialist skills of another trade, and defines the standard required to: demonstrate correct selection and safe use of tools; apply basic building or construction techniques; store or dispose of unused or waste materials.
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Application of the Unit

Application of the unit	This unit applies to working under routine supervision with intermittent checking usually within a team environment.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and confirm maintenance requirements	<p>1.1. Visual inspections are conducted of structures and facilities to locate and evaluate defects, deterioration and impending defects.</p> <p>1.2. Property infrastructure and resources are checked for correct operation, minor maintenance needs and damage.</p> <p>1.3. Maintenance plan is confirmed according to supervisor's instructions and enterprise requirements.</p>
2. Select and prepare tools, equipment and materials	<p>2.1. Tools, equipment and materials appropriate to the job requirements are selected and checked for serviceability according to manufacturer's specifications.</p> <p>2.2. Faulty or unsafe tools are identified and segregated for repair or replacement and reported according to enterprise requirements.</p> <p>2.3. Existing and potential hazards to health and safety are identified, assessed and reported according to Occupational Health and Safety (OHS) and enterprise requirements.</p>
3. Carry out routine maintenance	<p>3.1. Suitable personal protective equipment is selected, used, maintained and stored according to OHS requirements.</p> <p>3.2. Routine maintenance to structures and surroundings is carried out according to the maintenance plan and enterprise requirements.</p> <p>3.3. Minor repairs to building cladding, and treatments to structural finishes, are carried out as required to minimise deterioration.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Complete maintenance activities	<p>4.1. Worksite, tools and materials are cleaned, returned to operating order, and stored according to OHS and enterprise requirements.</p> <p>4.2. Unwanted materials and waste from maintenance activities is collected, treated and disposed or recycled according to enterprise, OHS and environmental requirements.</p> <p>4.3. Relevant information is documented according to industry, enterprise requirements and OHS requirements.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and follow safe work practices
- interpret and apply task instructions
- operate a broad range of tools and equipment
- carry out building and maintenance operations
- work in team environment
- observe and report on the condition of structures and equipment
- communicate with work team and supervisor
- estimate and calculate volumes and usage.

Required knowledge

- characteristics, capabilities and limitations of materials, equipment and tools
- operation of water taps and reticulation systems
- types of building cladding and finishes, purpose and use
- identification of defects and appropriate repair methods
- appropriate selection of repair materials
- OHS legislative requirements and Codes of Practice
- relevant Codes of Practice and procedures with regard to protection of the environment.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • demonstrate correct selection and safe use of tools • apply basic building or construction techniques • store or dispose of unused or waste materials.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Properties may include:	<ul style="list-style-type: none"> • land areas • worksites • buildings and all components.
Structures may include:	<ul style="list-style-type: none"> • greenhouses • igloos • potting houses • poly-tunnels • glass houses • shade houses • sheds • work sheds • cool rooms • staff rooms

RANGE STATEMENT

	<ul style="list-style-type: none"> • water tanks • yards • stock handling structures • silage pits • fodder and grain storages • park furniture • car parks, roads, pathways, pergolas • information boards, benches, landscape features and site furniture.
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Unit Sector(s)

Unit sector	Infrastructure
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCINF303A Plan and construct conventional fencing

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the functions required to plan and construct conventional fencing and defines the standard required to: site the fence line according to property or land management plan; estimate, cost and source fencing materials and arrange delivery; carry out fencing operations safely and efficiently; construct a fence that meets specifications in plan or contract and is within tolerances for materials; minimise environmental impacts and dispose of waste appropriately.
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Application of the Unit

Application of the unit	This unit applies to workers in rural enterprises or who work as fencing contractors. It is likely to be carried out under routine supervision within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine fencing requirements	<p>1.1.Fencing requirements are assessed and clarified according to enterprise objectives.</p> <p>1.2.Equipment, materials and labour requirements are determined, and estimated costings are maintained within budgetary constraints.</p> <p>1.3.Plan is prepared giving consideration to siting fences in relation to natural features and proposed uses.</p> <p>1.4.Legal requirements associated with fencing construction are identified.</p>
2. Prepare for construction	<p>2.1.Proposed fencing is checked and verified against property maps and work plan.</p> <p>2.2.Services, structures and features, which may impact on the fencing work, are identified and incorporated into the fencing plan.</p> <p>2.3.Tools and fencing equipment (including safety equipment), are arranged and safely and efficiently transported to the work site.</p> <p>2.4.Labour requirements are arranged and confirmed according to enterprise requirements.</p> <p>2.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented.</p>
3. Construct conventional fence	<p>3.1.Suitable personal protective equipment is selected, used, maintained and stored according to enterprise requirements.</p> <p>3.2.Fence lines are marked out and checked against work plan and property maps.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3.Fence is constructed according to work plan and fence design.</p> <p>3.4.Gates are attached and appropriately positioned for correct operation and function according to work plan.</p> <p>3.5.All work is carried out safely according to enterprise requirements.</p>
4. Complete fencing operations	<p>4.1.Work site is cleared and tidied and all waste is disposed of in an environmentally responsible manner.</p> <p>4.2.Tools and fencing equipment are transported safely from the work site and stored according to manufacturer's recommendations and enterprise requirements.</p> <p>4.3.Tools and equipment faults or malfunctions are reported for repair or replacement according to enterprise requirements.</p> <p>4.4.Relevant information is recorded and maintained according to enterprise requirements.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and implement safe work procedures
- construct end assemblies
- construct gate assemblies and swing gates
- string and strain wires to manufacturer's recommended tension
- tie fencing knots
- use and maintain fencing machinery and equipment
- select fencing materials
- arrange and purchase supplies
- demonstrate safe workplace practices
- consult with and report to management
- minimise environmental impacts
- use literacy skills to read, interpret and follow organisational policies and

REQUIRED SKILLS AND KNOWLEDGE

procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- issues affecting property fence planning and construction
- procedures for planning fencing in relation to the whole property plan
- range of fencing designs, construction methods and materials
- types of fencing construction tools and equipment
- fencing materials and costings
- common fencing hazards and safety precautions
- OHS legislative requirements and Codes of Practice
- relevant Codes of Practice with regard to the protection of the environment
- hazard identification, assessment and control.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- site the fence line according to property or land management plan
- estimate, cost and source fencing materials and arrange delivery
- carry out fencing operations safely and efficiently

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> construct a fence that meets specifications in plan or contract and is within tolerances for materials minimise environmental impacts and dispose of waste appropriately.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Fencing construction may include:	<ul style="list-style-type: none"> conventional fencing constructed with post and wire/wire netting under tension.

Unit Sector(s)

Unit sector	Farm infrastructure
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCIRG204A Lay irrigation and/or drainage pipes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of laying irrigation and/or drainage pipes and defines the standard required to: set out and excavate trenches using manual equipment and a machine operator; check trench depth and grade; lay bedding materials; position irrigation and/or drainage of varying types and sizes; install pipe joints and fittings to job specification.
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Application of the Unit

Application of the unit	This unit applies to workers in irrigation enterprises or contracting businesses. The work is normally carried out with limited supervision and within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare job	<p>1.1. Materials required for the job are transported to the location and stacked in a safe position.</p> <p>1.2. Tools, equipment and machinery are selected consistent with the requirements of the job.</p> <p>1.3. Quality Assurance requirements are recognised and adhered to.</p> <p>1.4. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p>
2. Set out and excavate trenches	<p>2.1. Location and depths of trenches is determined from job drawings.</p> <p>2.2. Trench location is set out with pegs and string line and clearly marked with appropriate marking material.</p> <p>2.3. Manual support is provided to machine operator with excavation of trenches, shoring or battering in accordance with OHS requirements.</p> <p>2.4. Trenches are cleaned out by hand and corners left square.</p> <p>2.5. Trench depths and grades are checked for conformity to job requirements.</p>
3. Lower and position pipes	<p>3.1. Bedding materials are laid and consolidated to specified depths and grades.</p> <p>3.2. Pipes are installed/lowered into position with appropriate mechanical equipment according to</p>

ELEMENT	PERFORMANCE CRITERIA
	specifications. 3.3.Pipe joints and fittings are installed to job specification. 3.4.Pipes are back filled to specifications and cover left level with surrounding ground.
4. Clean up	4.1.Site is cleared and excess soil, debris and unwanted materials removed in accordance with organisational procedures and environmental requirements. 4.2.Tools and equipment are cleaned, maintained and stored.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and adopt safe work practices
- read and interpret scale drawings and specifications
- use hand signals for communicating with machine operator
- measure trench width, depth, grade and location
- lay and join irrigation pipe
- level cover with existing ground
- use power tools and hand tools
- handle materials safely
- work safely to instructions
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- OHS requirements for excavating, filling trenches and laying pipes, including relevant legislation regulations and codes
- irrigation and/or drainage pipes, types and sizes
- hand and power tools and equipment
- bedding and backfill materials and handling methods

REQUIRED SKILLS AND KNOWLEDGE

- scale drawings for laying irrigation and/or drainage pipes
- hand signals for communication
- OHS issues and procedures related to trenching and pipe laying
- Quality Assurance procedures for excavating, filling trenches and laying pipes
- environmental impacts and procedures for laying pipe.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- set out and excavate trenches using manual equipment and a machine operator
- check trench depth and grade
- lay bedding materials
- position irrigation and/or drainage of varying types and sizes
- install pipe joints and fittings to job specification.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement**RANGE STATEMENT**

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Irrigation and drainage pipes may include:	<ul style="list-style-type: none"> • concrete • metal • polythene • polyvinylchloride (PVC) • the type and size of pipe will vary with the terrain, soil type and traffic load.
Fittings may include:	<ul style="list-style-type: none"> • valves • outlets • thrust blocks and connecting surfaces such as O-rings.
Mechanical equipment may include:	<ul style="list-style-type: none"> • equipment for lowering irrigation and/or drainage pipes but does not include operating excavation machinery such as trench diggers or ditch witches.

Unit Sector(s)

Unit sector	Irrigation
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCIRG206A Maintain pressurised irrigation systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of maintaining pressurised irrigation systems, including the repair and replacement of basic, simple components under routine supervision, and defines the standard required to: read and follow an operator's manual and manufacturer's specifications for pressurised irrigation systems; maintain irrigation system components including supply and distribution systems, outlets, strainers, pump screens and filters; inspect for dry areas and leaks; clear or replace worn or blocked parts and outlets; record and report maintenance observations and activities.
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Application of the Unit

Application of the unit	This unit applies to working with limited supervision, within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Carry out pre- and post-season maintenance	<p>1.1. Equipment is prepared pre-season for effective operation in accordance with design specifications and enterprise standards.</p> <p>1.2. System is flushed, cleaned, closed down and maintained post-season in accordance with design specifications and enterprise standards.</p> <p>1.3. Equipment requiring storage is dismantled, loaded, transported and stored without damage according to enterprise standards and safe working practices.</p>
2. Carry out routine maintenance activities on pressurised irrigation delivery systems	<p>2.1. All maintenance activities are carried out according to the maintenance program and the manufacturer's specifications.</p> <p>2.2. Mechanical equipment is serviced in accordance with the operator's manual or as directed.</p> <p>2.3. Supply and distribution systems are flushed and cleaned with sprinklers, emitters and/or drip line tapes replaced as directed.</p> <p>2.4. Outlets, strainers, pump screens and filters are cleaned and replaced as directed.</p> <p>2.5. System is visually inspected for leaks, operating faults and dry areas, and observations recorded in the maintenance book.</p> <p>2.6. Operation area is maintained in a clean and safe condition, and Occupational Health and Safety (OHS) procedures are followed.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Maintain system components	<p>3.1. System maintenance is carried out at scheduled times using equipment and materials in accordance with enterprise standards and manufacturer's specifications.</p> <p>3.2. Parts are inspected for wear or blockage and reported or replaced according to enterprise guidelines.</p> <p>3.3. Outlets are removed and cleaned and damaged ones are reassembled and replaced according to manufacturer's specifications.</p> <p>3.4. Operation area is maintained in a clean and safe condition, and OHS procedures are followed.</p>
4. Record and report maintenance activities	<p>4.1. All damage and blockage caused by pests and vermin is recorded by damage type, location and the section of the system affected.</p> <p>4.2. Damage or faulty pumps, valves, electrical components and computer systems are recorded and reported, and action taken to effect repairs.</p> <p>4.3. All routine maintenance activities are recorded and reported in accordance with enterprise standards.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and adopt safe work practices
- read and follow an operator's manual and manufacturer's specifications for pressurised irrigation systems
- maintain selected irrigation system components
- rectify damage caused by weeds or pests
- record and report maintenance observations and activities
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures

REQUIRED SKILLS AND KNOWLEDGE

- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- OHS and environmental legislative and enterprise procedures relating to pressurised irrigation system maintenance
- major components of a pressurised irrigation delivery system
- maintenance requirements and procedures for system components
- environmentally safe disposal procedures for chemical containers and residues, oils/grease and used parts.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- read and follow an operators manual and manufacturers specifications for pressurised irrigation systems
- maintain irrigation system components including supply and distribution systems, outlets, strainers, pump screens and filters
- inspect for dry areas and leaks
- clear or replace worn or blocked parts and outlets
- record and report maintenance observations and activities.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Pressurised irrigation systems include:	<ul style="list-style-type: none"> • micro-irrigation systems and spray irrigation systems ranging from manual operation and monitoring to fully automated with computer control and monitoring.
Micro-irrigation systems may include:	<ul style="list-style-type: none"> • mains pressure • low pressure • below or above ground • sprays systems • drip emitter trickle • t-tape • mini-sprinklers • capillary.
Spray irrigation systems may include:	<ul style="list-style-type: none"> • travelling irrigators (soft hose, hard hose boom type) • centre pivot • linear move • powered side roll hand shift permanent (installed) • bike shift/easy shift.

Unit Sector(s)

Unit sector	Irrigation
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Co-requisite units

Co-requisite units	

Co-requisite units		

Competency field

Competency field	
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AHCIRG301A Implement a maintenance program for an irrigation system

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of implementing a maintenance program for an irrigation system and defines the standard required to: inspect irrigation systems; test irrigation equipment; undertake minor repairs of equipment; record and report maintenance activities; dispose of unused or waste materials from site.
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Application of the Unit

Application of the unit	This unit is likely to be carried out under routine supervision within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Interpret an irrigation maintenance program	<p>1.1.Scope of maintenance works is determined according to the irrigation maintenance program.</p> <p>1.2.Frequency of maintenance works is determined and implemented according to the irrigation maintenance program.</p> <p>1.3.Irrigation maintenance standards are established in line with the irrigation maintenance program.</p> <p>1.4.Maintenance works are planned and prepared.</p> <p>1.5.Occupational Health and Safety (OHS) requirements are identified, associated hazards and risks assessed, and suitable controls implemented.</p> <p>1.6.Environmental considerations of irrigation maintenance activities are identified.</p>
2. Inspect irrigation system	<p>2.1.An inspection checklist is established according to the irrigation maintenance program.</p> <p>2.2.System is regularly inspected according to the checklist.</p> <p>2.3.Remedial action and repairs are identified and undertaken to restore system to full effectiveness.</p> <p>2.4.Servicing of mechanical equipment is undertaken according to the irrigation maintenance program.</p> <p>2.5.Results of maintenance works are assessed and recorded to ensure repairs or maintenance standards have been achieved according to the irrigation maintenance program.</p> <p>2.6.Surroundings are tidied and materials and equipment cleared from the site on completion of maintenance</p>

ELEMENT	PERFORMANCE CRITERIA
	works.
3. Record and report maintenance activities	3.1. Damage and blockage caused by pests and animals are recorded by damage type, location and the section of the system affected. 3.2. Damage or faulty pumps, valves, electrical components and computer systems are recorded and reported, and action taken to effect repairs. 3.3. Routine and preventative maintenance activities are recorded and reported in accordance with enterprise standards.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and implement safe work procedures
- inspect irrigation system
- test irrigation equipment
- record all test results clearly and concisely with attention to detail
- undertake minor repairs of equipment
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- soil/plant/water relationships
- environmental impacts of irrigation
- irrigation system components

REQUIRED SKILLS AND KNOWLEDGE

- common operational and maintenance problems
- enterprise, OHS and environmental policies and procedures
- environmentally safe disposal procedures for chemical containers and residues, oils/grease and used parts.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- inspect irrigation systems
- test irrigation equipment
- undertake minor repairs of equipment
- record and report maintenance activities
- dispose of unused or waste materials from site.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

System may include:

- pressurised irrigation systems such as

RANGE STATEMENT	
	micro-irrigation and spray irrigation systems, or gravity-fed systems. They may range from manual operation and monitoring to fully automated with computer control and monitoring.

Unit Sector(s)

Unit sector	Irrigation
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCIRG306A Troubleshoot irrigation systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of troubleshooting faults and blockages in irrigation systems and defines the standard required to: read and apply system specifications, technical manuals and supply/spare parts inventories; locate and identify faulty components and blockages; apply shutdown sequence and isolation procedures; remove faulty components from the system and install replacements; clear blockages or replace blocked sections; and return isolated or shutdown components to service.
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Application of the Unit

Application of the unit	This unit applies to workers on irrigation farms or to irrigation contractors. The work is likely to be carried out under routine supervision within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Locate and identify faulty components and blockages	<p>1.1.Irrigation system and component function is determined by reference to system specifications and technical manuals.</p> <p>1.2.Monitoring and maintenance records are checked and reviewed.</p> <p>1.3.Operational tests are carried out according to system specifications, technical manuals and Occupational Health and Safety (OHS) requirements.</p> <p>1.4.Faulty components and blockages are identified and documented according to enterprise policy and procedures.</p>
2. Shut down/isolate component	<p>2.1.Shut own sequence and isolation procedures are applied as required according to system specifications and technical manuals.</p> <p>2.2.Safe shutdown or isolation is verified.</p> <p>2.3.Safety/security lock off devices and signage is installed according to enterprise policy and procedures.</p>
3. Replace faulty components and clear blockages	<p>3.1.Access to faulty components and blockages is arranged.</p> <p>3.2.Faulty components are removed from the system, according to system specifications and technical manuals, and repaired or disposed of in an environmentally responsible way.</p> <p>3.3.Replaceable components are selected from</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>manufacturer catalogues and procured using enterprise procedures.</p> <p>3.4.Replacement components are installed to meet system specifications according to technical manuals.</p> <p>3.5.Replace faulty components and clear blockages are carried out without unnecessary damage to surrounding site and structures.</p> <p>3.6.Blockages are cleared or blocked sections replaced according to enterprise procedures.</p>
4. Return system to normal operating status	<p>4.1.Isolated or shutdown components are returned to service.</p> <p>4.2.Operational tests are carried out according to system specifications, technical manuals and OHS requirements.</p> <p>4.3.System is returned to normal operational set-up.</p> <p>4.4.Repair activities are reported and recorded according to enterprise policy and procedures.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- operate, maintain and repair irrigation systems
- shut down and isolate components
- replace components
- carry out operational tests
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required

REQUIRED SKILLS AND KNOWLEDGE

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- identification, characteristics and operation of replaceable components of irrigation systems
- system malfunctions and their likely causes
- environmental impacts of irrigation, using water from any ground or underground source
- purchasing procedures
- isolation procedures
- enterprise policies and procedures
- irrigation, OHS and environmental guidelines.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- read and apply system specifications, technical manuals and supply/spare parts inventories
- locate and identify faulty components and blockages
- apply shutdown sequence and isolation procedures
- remove faulty components from the system and install replacements
- clear blockages or replace blocked sections
- return isolated or shutdown components to service.

Context of and specific resources for

Competency requires the application of work practices

EVIDENCE GUIDE	
assessment	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
System may include:	<ul style="list-style-type: none"> pressurised irrigation systems, such as micro-irrigation, spray irrigation or gravity-fed irrigation systems.

Unit Sector(s)

Unit sector	Irrigation
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCIRG406A Plan on-site irrigation system installation and construction work

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers planning on-site irrigation system installations and construction work and defines the standard required to: identify operational requirements from contract documentation; develop strategies and plan procedures for installation and construction; develop a project plan with tasks, responsibilities, timelines and costs.
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Application of the Unit

Application of the unit	This unit applies to irrigation installers who plan on-site irrigation system installation and construction work.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Appraise contract documentation and translate into operational requirements	<p>1.1. Copy of building approval and conditions is obtained as required.</p> <p>1.2. Contract documentation is reviewed for any unusual aspects of construction, use of materials and penalties.</p> <p>1.3. Availability of sub-contractors is ascertained and selected to suit job requirements.</p> <p>1.4. Availability of materials is checked with suppliers.</p> <p>1.5. Site access limitations are assessed.</p> <p>1.6. Relevant authorities controlling construction work advised of commencement date for project as required.</p>
2. Develop strategies for implementing the construction operations	<p>2.1. Procedures for controlling and recording site deliveries are established.</p> <p>2.2. Procedures for recording the hire of plant and equipment are determined.</p> <p>2.3. Occupational Health and Safety (OHS) procedures are established, including hazard/risk management.</p> <p>2.4. Procedures are established for dealing with environmental issues associated with irrigation construction work.</p> <p>2.5. Procedures required for the control of multiple projects are determined.</p>
3. Prepare project schedule for irrigation installation and construction	<p>3.1. Construction operations are prepared in sequence.</p> <p>3.2. Operations are entered into a manually prepared schedule or computer based software package.</p> <p>3.3. 'Critical path' is identified and schedule revised with</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>new activities/projects, as needed, and documented.</p> <p>3.4. Timeframe is adjusted to take account of anticipated delays.</p>
4. Determine all the required resources for project	<p>4.1. Temporary services and site accommodation is determined as required.</p> <p>4.2. Plant requirements and dates are selected and accessed.</p> <p>4.3. On site labour requirements are determined.</p>
5. Prepare dilapidation report	<p>5.1. Records are made of the condition of existing building(s) to be retained and structures on the adjacent site boundaries.</p> <p>5.2. Copies of reports are submitted to adjacent building owners prior to commencing construction.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analyse contract conditions
- develop strategies
- schedule projects
- determine resources
- identify adverse environmental impacts of irrigation activities and appropriate remedial/preventative action
- incorporate legislative and enterprise OHS and environmental procedures into planning
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

REQUIRED SKILLS AND KNOWLEDGE
abilities.
Required knowledge
<ul style="list-style-type: none"> • installation and construction processes for on-site irrigation systems • logical construction sequence for the system • analysis of the required project resources • environmental impacts of irrigation using water from any ground or underground source • relevant enterprise OHS and environmental procedures • relevant Australian Standards (e.g. AS3500) • effect of main soil types on approach to excavation work and installation of irrigation components.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • identify operational requirements from contract documentation • develop strategies and plan procedures for installation and construction • develop a project plan with tasks, responsibilities, timelines and costs.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Planning may include:	<ul style="list-style-type: none"> the planning of installation and construction work for both gravity fed and pressurised irrigation systems.

Unit Sector(s)

Unit sector	Irrigation
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCIRG503A Design irrigation, drainage and water treatment systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the designing of irrigation, draining and water treatment systems and defines the standard required to: identify design requirements for drainage and water treatment; determine specifications for suitable pumping and power systems; design distribution, drainage, storage and treatment systems; design water transfer, recharge, reuse and harvesting systems to conserve natural resources and; assess the environmental impacts of the irrigation system to ensure it will comply with environmental protection agency regulations.
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Application of the Unit

Application of the unit	This unit applies to those who design irrigation, drainage and/or water treatment systems with advice from technical advisers.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine design requirements	<p>1.1. Water is predicted to be available in sufficient quantity and quality for the particular crop or situation at the time it is needed by the enterprise.</p> <p>1.2. Water transfer, recharge, reuse and harvesting systems are designed to conserve natural resources.</p> <p>1.3. The process of collecting or storing water does not degrade the water quality for the enterprise or the environment.</p> <p>1.4. Construction specifications define the work required to make suitable water available to the enterprise in accordance with environmental and Occupational Health and Safety (OHS) requirements.</p> <p>1.5. Environmentally sensitive areas are identified and protected according to local, State and National legislation.</p> <p>1.6. Design calculations and decisions are documented to enterprise requirements.</p>
2. Define pumping and power systems	<p>2.1. Pumps are selected to deliver water efficiently when needed, from the water storage at the flow and pressure required to operate the distribution system to the design specifications.</p> <p>2.2. The pump motor combinations are efficient and the pumps are reliable, functional, serviceable and flexible for the intended application.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Energy requirements are determined, and layout of electricity lines are determined and checked with local authority.</p> <p>2.4. The relationship between capital and operational costs are optimised including a comparison of energy sources.</p> <p>2.5. Structures, valves and accessories are selected and integrated into a functional system that can be monitored and maintained according to enterprise guidelines.</p> <p>2.6. Performance indicators, design calculations and decisions are documented according to enterprise guidelines.</p> <p>2.7. Construction specifications define work required to make suitable pumping and power system available to enterprise.</p> <p>2.8. Power supply design specification is checked with power authorities.</p>
3. Design an irrigation distribution system	<p>3.1. Detailed topographic survey is conducted or an accurate map is obtained showing extent of irrigation, planting layout, physical constraints and contours with suitable interval.</p> <p>3.2. Detailed soil survey is conducted at suitable intervals and mapped to show variation in readily available water.</p> <p>3.3. Water budgets are determined having regard to the evapotranspiration state of the crop/plants, soil moisture characteristics and cultural practices.</p> <p>3.4. Distribution systems are evaluated and designed with respect to a range of key variables.</p> <p>3.5. Pipes, valves and fittings are sized according to design system specifications so that capital cost is balanced against operation costs over the anticipated system life.</p> <p>3.6. Flows, water levels and pressures are calculated and documented to be within the acceptable tolerances for optimum performance.</p> <p>3.7. Flows, water levels and pressures are achievable by the pumps operating at optimum efficiency and according to enterprise standards.</p> <p>3.8. Mechanisms for controlling and adjusting pressure are included, and isolation valves direct water to areas with different irrigation schedules.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.9. Channel systems and attendant structures are designed according to industry recommendations, and channel flow velocities are calculated according to enterprise standards.</p> <p>3.10. Soil types have been compared for erodeability and suitable fill has been selected for construction according to enterprise standards.</p> <p>3.11. Construction plans and specifications define work required to achieve the required standards of uniformity and efficiency of water application according to industry standards</p>
4. Design a drainage, storage and treatment system	<p>4.1. Regional geology and geography is investigated to predict sustainability of irrigation and storage.</p> <p>4.2. Site investigations to assess depth of clay, depth of ground water, soil and water salinity, and structural or chemical impediments are used to determine the most cost effective storage system.</p> <p>4.3. Predictions of leaching fractions and salt movements are documented, and soil amelioration and drainage management plans are developed.</p> <p>4.4. The need for leachate interception and dewatering system is determined, and if required, construction specification prepared for interception and collection, water treatment, disposal, and reuse or recycle.</p> <p>4.5. Drains and structures are capable of carrying the design water volumes and intensities according to enterprise standards.</p> <p>4.6. Damage from water logging is minimised according to enterprise standards.</p> <p>4.7. Hydrological calculations predict volumes and rates of surface run-off according to enterprise standards.</p>
5. Determine capital expense budget	<p>5.1. Design calculations and decisions are documented and relevant information is communicated clearly through plans, specifications and manuals.</p> <p>5.2. Design output is checked by a competent designer against enterprise objectives.</p> <p>5.3. Materials requirements are determined and documented from plans and specifications.</p> <p>5.4. Labour requirements are estimated, based upon documented work schedule with reasonable allowance for variances in work schedules.</p> <p>5.5. Costing attributed to each component is based upon quoted information from suppliers, or sound analysis</p>

ELEMENT	PERFORMANCE CRITERIA
	of individual elements.
6. Determine operating expense budget	6.1. Operating expense budget indicates all expenses applicable to the completed irrigation system.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect and analyse information
- identify adverse environmental impacts of irrigation, drainage and water treatment activities and appropriate remedial action
- identify design requirements
- develop specifications
- compare costings
- develop budgets
- document outcomes
- develop and implement relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- design processes
- developments in irrigation technology
- drainage and storage development technology
- latest treatment technology
- automatic control and monitoring systems
- waste management and environmental issues
- budgeting

REQUIRED SKILLS AND KNOWLEDGE

- contractual development and obligations
- environmental protection agency regulations
- environmental impacts of irrigation, drainage and water treatment using water from any ground or underground source
- cost/benefit analysis
- OHS and environmental protection legislation, codes of practice and enterprise policies and procedures.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify design requirements for drainage and water treatment
- determine specifications for suitable pumping and power systems
- design distribution, drainage, storage and treatment systems
- design water transfer, recharge, reuse and harvesting systems to conserve natural resources
- assess the environmental impacts of the irrigation system to ensure it will comply with environmental protection agency regulations.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Reuse systems may include:	<ul style="list-style-type: none"> • dis-infestation and filtering equipment.
Irrigation distribution systems covered by this standard are:	<ul style="list-style-type: none"> • micro-irrigation systems • spray irrigation systems • surface irrigation systems • basin irrigation.
Systems may range from:	<ul style="list-style-type: none"> • manual operation and monitoring to fully automated with computer control and monitoring.

Unit Sector(s)

Unit sector	Irrigation
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCLSC302A Construct landscape features using concrete

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of constructing concrete structures and features and defines the standard required to: interpret site plans and specifications; set out and prepare a site for receipt of concrete, pour, set and finish concrete; check quality of work and clean up site.
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Application of the Unit

Application of the unit	This unit applies to the construction of concrete structures and features as a component of landscape project works.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1.Plans and specifications are interpreted and clarified with the supervisor. 1.2.The quantity and quality of materials are checked to ensure they conform to design drawings and specifications. 1.3.Tools and equipment are selected and checked for serviceability according to enterprise guidelines. 1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented. 1.5.Environmental implications of constructing concrete structures are identified and reported to the supervisor.
2. Set out and prepare the site	2.1.Services are determined and located from site plans. 2.2.The position of the structure or feature is marked out according to design drawings and specifications. 2.3.Profiles are established to conform to the tolerances nominated within the design drawings and specifications. 2.4.Subsoil is prepared by removing all debris, vegetable matter and topsoil to provide a solid foundation for concrete. 2.5.Drainage systems are installed according to design drawings and specifications. 2.6.Form work is installed to the site in a manner that will ensure it remains rigid during concrete pouring operations. 2.7.Sub-base material is placed and compacted to the required finished levels. 2.8.Preparation of the site is completed according to the type of structure or feature to be constructed.
3. Mix and pour	3.1.Proportions for concrete mix are determined

ELEMENT	PERFORMANCE CRITERIA
concrete	<p>according to the strength requirements of the project.</p> <p>3.2. Volume of dry materials necessary to produce final concrete mix is determined.</p> <p>3.3. All dry ingredients and required additives are mixed together to ensure a thorough blending of all materials is achieved.</p> <p>3.4. Sufficient water is introduced to produce a concrete mix to the required consistency.</p> <p>3.5. Concrete mix samples are taken for testing, if required, to check for conformity to specifications.</p> <p>3.6. Concrete is poured to designated levels in a manner to avoid segregation of materials.</p> <p>3.7. Concrete is consolidated using an approved vibration method to industry standard (AS3600) to ensure air pockets are eliminated.</p>
4. Finish concrete	<p>4.1. Concrete is screeded to a flat surface to maintain the desired finished level.</p> <p>4.2. Surface is trowelled according to design drawings and specifications.</p> <p>4.3. A Concrete is finished off according to design drawings and specifications.</p>
5. Check quality of work and clean up site	<p>5.1. Quality of finished works is inspected to ensure the standard of the finished structure or feature is in accordance with design drawings and specifications.</p> <p>5.2. Form work is removed and cleaned in a manner which will allow for re-use of the form work.</p> <p>5.3. All debris is removed and disposed of in a manner that minimises risk to the environment.</p> <p>5.4. All tools and equipment are cleaned and stored according to enterprise guidelines.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- measure and construct profiles using mathematical techniques

REQUIRED SKILLS AND KNOWLEDGE

- establish levels using levelling equipment
- undertake and interpret tests performed on a concrete mix
- place, consolidate and finish concrete
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- MPA testing theory and what effects MPA specifications in a concrete mix
- the comparative environmental implications associated with soil removal and the establishment of drainage systems
- industry standards in relation to reinforcing and consolidating concrete.
- sub-base and sub-grade materials and preparation.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- interpret site plans and specifications
- set out and prepare a site for receipt of concrete
- pour, set and finish concrete
- check quality of work and clean up site.

Context of and specific resources for

Competency requires the application of work practices under work conditions. Selection and use of resources

EVIDENCE GUIDE	
assessment	for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Features may include:	<ul style="list-style-type: none"> structures including paths, driveways, edgings, footings, floors, steps, walls, fences, pool surrounds, entertaining areas and ornamental garden elements.

Unit Sector(s)

Unit sector	Landscape
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCLSC304A Erect timber structures and features

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of erecting timber structures and features as a component of landscape project works and defines the standard required to: mark out the site for the structure according to design drawings and specifications; establish the levels and prepare footings where required; use a wide range of power tools efficiently and safely; fix, join or assemble timbers using a variety of recognised methods; apply a variety of surface finishes; ensure the completed structure or feature meets the quality standard in the specifications.
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Application of the Unit

Application of the unit	This unit applies workers engaged in the process of erecting timber structures and features as a component of landscape project works.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare work	<p>1.1.Plans and specifications are interpreted.</p> <p>1.2.The quantity and quality of materials are checked for conformation to design drawings and specifications.</p> <p>1.3.Tools and equipment are selected and checked for serviceability according to industry practice.</p> <p>1.4.Personal Protective Equipment (PPE) is selected, used and maintained according to procedures.</p> <p>1.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed, and controls are implemented.</p>
2. Position the structure and prepare the profile and footings	<p>2.1.Services are identified and located from site plans.</p> <p>2.2.The position of the structure is marked out according to design drawings and specifications.</p> <p>2.3.Profiles are established to conform to the tolerances nominated within the design drawings and specifications.</p> <p>2.4.Footings are excavated and prepared according to the type of structure to be erected.</p>
3. Prepare and cut timber components	<p>3.1.Components are prepared for assembly to the requirements contained in the design drawings and specifications.</p> <p>3.2.The length of components and the positions of cuts and joints are marked out with a pencil according to designated specifications in design drawings.</p> <p>3.3.Cutting tools are selected, used and maintained</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to manufactures recommendations and OHS specifications.</p> <p>3.4.Components are cut, checked out and drilled accurately in preparation for joining and assembly.</p>
4. Assemble and erect structure	<p>4.1.Timber components are fixed, joined or assembled into position and fixed into place according to design drawings and specifications.</p> <p>4.2.Remaining components are installed and fixed into position according to design drawings and specifications.</p> <p>4.3.Structure is finished off to ensure all components are secure and complete.</p> <p>4.4.Coatings are applied according to specifications and manufacturer's recommendations.</p>
5. Check quality of work and clean up site	<p>5.1.Quality of finished works is checked for compliance with design drawings and specifications.</p> <p>5.2.Debris is cleaned from structure and site according to industry practice.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- measure and mark lengths of timber accurately
- fix, join or assemble timbers using a variety of recognised methods
- apply surface finishes
- use surveyors' instruments
- excavate footings
- use hand and power tools according to OHS requirements
- estimate quantities
- demonstrate safe working practices
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening,

REQUIRED SKILLS AND KNOWLEDGE

clarifying information and consulting with supervisors as required

- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- levelling principles and techniques
- timber properties and characteristics
- common timber joints
- timber fixing methods and product
- footings and their construction used for timber structures
- OHS requirements associated with erecting structures and features
- environmental implications associated with excavation and construction activity.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- mark out the site for the structure according to design drawings and specifications
- establish the levels and prepare footings where required
- use a wide range of power tools efficiently and safely
- fix, join or assemble timbers using a variety of recognised methods
- apply a variety of surface finishes
- ensure the completed structure or feature meets the quality standard in the specifications.

Context of and specific resources for

Competency requires the application of work practices

EVIDENCE GUIDE	
assessment	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Structures and features may include:	<ul style="list-style-type: none"> • timber structures and features such as: <ul style="list-style-type: none"> • fences • pergolas • trellises • lattices • gazebos • small bridges • handrails • boardwalks • steps • decking • sheds • playhouses • screens • site furniture.

Unit Sector(s)

Unit sector	Landscape
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCMOM301A Coordinate machinery and equipment maintenance and repair

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of coordinating machinery and equipment maintenance and repair for a small enterprise and defines the standard required to: seek technical advice on scale of repairs required where necessary; establish priorities for work to be carried out; calculate material and resource requirements and place orders; respond to contingencies and take corrective actions where necessary; monitor and document personnel, activities, timelines and materials usage; monitor and report on activities undertaken.
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Application of the Unit

Application of the unit	This unit applies to workers in agriculture, horticulture and land management who ensure that machinery and equipment for the enterprise is maintained and repaired in a way that allows the core business of the enterprise to continue with minimal disruption.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for maintenance and repair work	1.1. Requirements of the work responsibilities are clarified with the supervisor and according to enterprise guidelines. 1.2. Equipment and material resource requirements are identified according to the scope of the coordination work and the supervisor's instructions. 1.3. The priorities for maintenance and repair activities and time allocation is identified, documented and presented to the supervisor for verification. 1.4. The environmental implications of the proposed maintenance and repair work are identified and the likely outcomes assessed and reported to the supervisor. 1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented. 1.6. Personal Protective Equipment (PPE) is selected, used and maintained according to procedures.
2. Maintain and repair machinery and	2.1. Equipment/machinery is maintained and repaired as authorised by the supervisor and according to

ELEMENT	PERFORMANCE CRITERIA
equipment	<p>enterprise guidelines and work place priorities.</p> <p>2.2. Materials to assist in maintenance and repair work are purchased, stored and/or used as required.</p> <p>2.3. Delivery of materials to the site is organised according to workplace priorities.</p> <p>2.4. Machinery and equipment is organised to be on-site in good order when they are required.</p> <p>2.5. Maintenance and repairs requiring specialist attention and work are identified and organised according to enterprise guidelines.</p>
3. Co-ordinate and report on maintenance and repair activities	<p>3.1. Resources are coordinated and timed to suit the maintenance and repair activities and priority of work.</p> <p>3.2. Operators are informed of appropriate use and their responsibilities in respect to operational maintenance requirements of machinery and equipment.</p> <p>3.3. Personnel, activities, timelines and materials usage are monitored and documented according to enterprise guidelines.</p> <p>3.4. Contingency situations are recognised and reported to the supervisor and corrective actions taken according to enterprise guidelines.</p> <p>3.5. A simple report is written to inform management of maintenance and repair activities undertaken and completed.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- implement safe work procedures and ensure a safe workplace
- read and interpret documentation associated with work site activities
- calculate material and resource requirements
- co-ordinate a team to achieve optimum performance
- document results clearly and concisely
- perform an OHS risk assessment

REQUIRED SKILLS AND KNOWLEDGE

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- work schedule programming
- possible causes of disruption to work activities and their effect on quality and time schedules
- responsibilities and requirements for maintaining and repairing machinery and equipment
- the range, use and availability of materials, equipment and machinery that may be required for the project
- environmental awareness associated with undertaking maintenance and repair work on machinery and equipment to ensure the impact on the environment is minimal
- OHS issues, legislative requirements and codes of practice.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- seek technical advice on scale of repairs required where necessary
- establish priorities for work to be carried out
- calculate material and resource requirements and place orders
- respond to contingencies and take corrective actions

EVIDENCE GUIDE	
	where necessary <ul style="list-style-type: none"> • monitor and document personnel, activities, timelines and materials usage • monitor and report on activities undertaken.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Hazards may include:	<ul style="list-style-type: none"> • disturbance of services • solar radiation • dust • noise • through traffic • uneven surfaces and holes • moving machinery and machinery parts • powered equipment and hand tools • hazards from use of hired equipment • overhead hazards including powerlines.

Unit Sector(s)

Unit sector	Machinery operation and maintenance
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Co-requisite units

Co-requisite units	
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Co-requisite units		

Competency field

Competency field	
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AHCMOM402A Supervise maintenance of property machinery and equipment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers supervising maintenance of property machinery and equipment and defines the standard required to: schedule and cost the maintenance requirements of machinery; order materials, allocate resources and schedule maintenance; carry out maintenance with regard to timelines, costs and safety; deal with contingencies and reschedule maintenance where necessary; dispose of waste products according to environmental legislation and enterprise procedures.
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Application of the Unit

Application of the unit	This unit applies to those whose job role includes supervising the maintenance of property, machinery and equipment.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare maintenance plan	<p>1.1. Maintenance requirements for property, machinery and equipment are identified from relevant information sources.</p> <p>1.2. Maintenance costs are identified and quantified.</p> <p>1.3. Maintenance requirements are checked against warranty, insurance agreements and indemnity provisions.</p> <p>1.4. Maintenance plan is developed to promote and sustain performance and production systems in line with enterprise requirements.</p> <p>1.5. Effective workplace communication strategies are established with regard to maintenance plan, environmental and Occupational Health and Safety (OHS) policies, and enterprise requirements.</p>
2. Implement maintenance plan	<p>2.1. Resource and supply requirements are identified, secured and included in enterprise budgets and operational considerations.</p> <p>2.2. Prepared maintenance schedules and procedures are effectively communicated to staff, contractors and suppliers to minimise negative impacts on production and costs.</p> <p>2.3. Maintenance plan is implemented and scheduled to minimise disruption to enterprise operations.</p> <p>2.4. Potential risks are assessed with regard to staff and supply problems, and contingency plans prepared accordingly.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5.Tasks required are aligned to staff capability, and training is provided where required.</p> <p>2.6.Machinery and equipment are operated to manufacturer's specifications, OHS and enterprise requirements.</p>
<p>3. Monitor maintenance plan</p>	<p>3.1.Maintenance activities and performance are monitored against maintenance plan for efficiency and effectiveness.</p> <p>3.2.Workplace hazards and environmental implications associated with maintenance procedures are monitored and controlled in line with OHS and enterprise requirements.</p> <p>3.3.Costs are monitored and controlled within enterprise budget requirements.</p> <p>3.4.Relevant information with regard to the maintenance plan is documented in accordance with enterprise requirements.</p> <p>3.5.Property, machinery and equipment are maintained in clean and safe operational conditions.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and oversee safe work practices
- plan, cost and schedule maintenance requirements
- establish and monitor performance targets for maintenance team
- monitor and access performance of maintenance activities
- observe the emergence and supervise the removal of workplace hazards and risks
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex

REQUIRED SKILLS AND KNOWLEDGE
<p>workplace measures and data</p> <ul style="list-style-type: none"> • use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.
Required knowledge
<ul style="list-style-type: none"> • types of maintenance requirements with regard to property, machinery and equipment • maintenance and servicing cycles for property, machinery and equipment • relevant State/Territory legislation, regulations and Codes of Practice with regard to workplace OHS and environmental protection requirements, and the use and control of hazardous substances • hazards and risks and respective control measures • training and instruction techniques for directing the learning of staff.

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • schedule and cost the maintenance requirements of machinery • order materials, allocate resources and schedule maintenance • carry out maintenance with regard to timelines, costs and safety • deal with contingencies and reschedule maintenance where necessary • dispose of waste products according to environmental legislation and enterprise procedures.

EVIDENCE GUIDE	
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Supervision may include:	<ul style="list-style-type: none"> the range of maintenance programs performed in agriculture horticulture industry enterprises.

Unit Sector(s)

Unit sector	Machinery operation and maintenance
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCNAR303A Implement revegetation works

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of implementing revegetation works and defines the standard required to: prepare the site for revegetation works; conduct a site hazard identification and risk control assessment; recognise and treat plant diseases on a revegetation site; treat weeds and competing plants; carry out revegetation works; and clean and maintain the revegetated site.
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Application of the Unit

Application of the unit	This unit applies to workers re-establishing vegetation in natural restoration areas.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare equipment and materials	<p>1.1. Tools and materials are selected for the task to be undertaken according to manufacturer guidelines and Occupational Health and Safety (OHS) regulations.</p> <p>1.2. Plant materials are identified, obtained and stored according to enterprise guidelines.</p> <p>1.3. Labour and machinery requirements are estimated and organised.</p> <p>1.4. Schedule of works is prepared and provided to management/client.</p>
2. Prepare the revegetation site	<p>2.1. Site hazards are identified, risks assessed and suitable risk controls implemented.</p> <p>2.2. Site preparation is undertaken according to planting plan and/or supervisor's instructions.</p> <p>2.3. Soil ameliorants are used, if necessary, according to plan specifications.</p> <p>2.4. Revegetation site is marked out according to supervisor's directions and/or plans.</p> <p>2.5. All competing plants, debris and pollutants are treated according to the plan specifications and risk controls implemented.</p> <p>2.6. Treatments are selected according to the risk controls selected and applied according to documented guidelines and manufacturer instructions.</p> <p>2.7. Protective structures are installed where indicated by the risk controls implemented.</p>
3. Effect revegetation works	<p>3.1. Revegetation works are implemented according to enterprise guidelines.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2.All plants materials are inspected prior to revegetation works and defective materials are discarded.</p> <p>3.3.Plant materials to be installed are treated according to documented guidelines.</p> <p>3.4.Plant materials are installed according to planting program.</p> <p>3.5.Remedial action is undertaken to ensure all of the revegetation program requirements have been implemented.</p> <p>3.6.Potential threats to revegetation works are identified and reported.</p>
4. Maintain revegetated site	<p>4.1.Site is maintained according to the planting program requirements.</p> <p>4.2.Remedial action and plant protection is undertaken according to the needs of the species.</p> <p>4.3.Tools and equipment are cleaned, maintained and stored consistent with manufacturer specifications.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- prepare equipment and materials
- prepare a planting site
- effect revegetation works
- maintain revegetated site
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- revegetation techniques
- ecosystems, provenance and habitat requirements
- factors affecting the timing and method of planting
- identification of pests and diseases of trees
- principles and methods relating to the prevention and control of pests and diseases
- safety requirements when handling and using hazardous goods
- nutrient requirements of a range of plant species and cultivars
- physiology of plant growth
- techniques for protecting and securing/anchoring trees and shrubs
- plant selection and culture
- soils and nutrients
- calculations for materials.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare the site for revegetation works
- conduct a site hazard identification and risk control assessment
- recognise and treat plant diseases on a revegetation site
- treat weeds and competing plants
- carry out revegetation works
- clean and maintain the revegetated site.

Context of and specific resources for

Competency requires the application of work practices

EVIDENCE GUIDE	
assessment	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
The types of establishment methods may include:	<ul style="list-style-type: none"> • a range of establishment methods covering: <ul style="list-style-type: none"> • hand planting • mechanical planting • direct seeding • encouragement of natural regeneration • mechanical sowing • fire.
Earthworks may include:	<ul style="list-style-type: none"> • irrigation • drainage • ripping • cultivating • clearing debris.

Unit Sector(s)

Unit sector	Natural area restoration
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Co-requisite units

Co-requisite units		

Co-requisite units		

Competency field

Competency field	
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AHCNAR402A Plan the implementation of revegetation works

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers planning the implementation of revegetation works and defines the standard required to: establish the purpose and client preferences for the site to be revegetated; carry out a site visit and confirm any planning requirements; develop a plan for the site, detailing the resources required and the program of works; develop timelines for the establishment and maintenance phases of the project; document the staged implementation plan.
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Application of the Unit

Application of the unit	This unit applies to supervisors of revegetation programs who plan the implementation of revegetation works.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Carry out preliminary planning activities for revegetation works	<p>1.1. Client preferences and contract requirements including the scope of the work for the revegetation project are confirmed and verified.</p> <p>1.2. Specific statutory obligations and site responsibilities that may affect the implementation of works are identified.</p> <p>1.3. An initial site visit is conducted to verify the biophysical and other factors of the project area including environmental considerations and historical modifications.</p> <p>1.4. Occupational Health and Safety (OHS) obligations associated with the revegetation works are identified, OHS hazards are assessed and controls developed, costed and documented in the implementation plan according to enterprise guidelines.</p> <p>1.5. The availability, quantity and costs of plants and other materials listed in the project schedules are verified.</p>
2. Prepare a staged plan of work	<p>2.1. Resources, tools and equipment required for revegetation procedures and ongoing maintenance of the site are identified, costed and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.2. Site access and establishment issues are investigated to consider and plan for the environmental impacts of site work practices, avoid safety hazards to workers or the public, and minimise disruption to site works during the construction period.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3.A program of works is prepared to provide a sequential allocation of resources and work tasks to meet the project contract timelines.</p> <p>2.4.Timelines are developed for site establishment, the establishment period and maintenance of works.</p> <p>2.5.Seasonal factors and impacts are incorporated in the staging strategy to allow for planting supply and care, wet day access, machinery use, fire hazards and establishment period.</p> <p>2.6.Where required, special project works related to habitat resource development and enhancement are included in the staged implementation plan.</p> <p>2.7.Document the staged implementation plan.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- assess a site for opportunities and constraints associated with implementation of revegetation works
- prepare schedules for implementation of revegetation works
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- awareness of the role of revegetation works in the restoration of the environment
- practical understanding of the environmental issues associated with undertaking revegetation works, and the need to comply with legislation and ensure that the

REQUIRED SKILLS AND KNOWLEDGE

- impact on the environment is minimal
- principles of ecology including specific native plant and animal relationships and habitat requirements
 - identification, propagation and establishment techniques of specific native plant species
 - site evaluation techniques including methods of analysing soils, waterways and their condition
 - practical understanding of the advantages and disadvantages of a range of revegetation procedures
 - chemical, cultural and biological weed and feral animal control techniques
 - soil conservation and enhancement techniques and their advantages and disadvantages in reference to specific sites and habitats
 - soil erosion control and stormwater management techniques
 - maintenance requirements and practices for native plants prior to and after initial establishment
 - growth habits and cultural requirements of specific native plants under a range of soil and environmental conditions
 - OHS hazards associated with undertaking revegetation works and the controls necessary to remove or minimise risks associated with them
 - contract documents including specifications, plans of landscape works, services, supplies and surveyors documents.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- establish the purpose and client preferences for the site to be revegetated
- carry out a site visit and confirm any planning

EVIDENCE GUIDE	
	requirements <ul style="list-style-type: none"> • develop a plan for the site, detailing the resources required and the program of works • develop timelines for the establishment and maintenance phases of the project • document the staged implementation plan.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Revegetation works may include:	<ul style="list-style-type: none"> • works for disturbed, degraded or remnant natural sites.

Unit Sector(s)

Unit sector	Natural area restoration
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCNSY201A Pot up plants

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the production procedure of staged containerisation of nursery plants after propagation in production nurseries and defines the standard required to: prepare tools, equipment and plants for potting up; prepare growing media for potting up plants; pot up plants to required specification pot size; type and carry out follow-up procedures to potting up.
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Application of the Unit

Application of the unit	This unit applies to transplanting established plants with developed root systems sown from seed, from cuttings, layering, growing on tissue cultured plants, division or splitting, spores, cloning, and budding or grafting into larger appropriate sized containers of growing media. Potting up involves working within routine methods and procedures under supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for potting up operations	1.1. Workplace information is interpreted and clarified according to instructions. 1.2. Occupational Health and Safety (OHS) hazards are identified and reported to the supervisor. 1.3. Tools and equipment for potting up are selected and used according to documented guidelines. 1.4. Work area is cleaned and disinfected according to company hygiene practices. 1.5. Materials are collected and checked to ensure sufficient quantity and quality for potting up operations.
2. Prepare growing media	2.1. Suitable Personal Protective Equipment (PPE) is selected, used and maintained. 2.2. Media components are measured and mixed according to documented guidelines. 2.3. Growing media is tested to ensure the product complies with media specifications.
3. Pot up propagated plants	3.1. Plants are prepared for potting in accordance with enterprise guidelines. 3.2. Plants are graded during the potting process

ELEMENT	PERFORMANCE CRITERIA
	<p>according to quality specifications.</p> <p>3.3. Media level in pots is adjusted to produce a well-furnished plant according to documented guidelines.</p> <p>3.4. Placement and depth of plants comply with the planting method and plan.</p> <p>3.5. Potting operations are carried out according to written OHS requirements.</p>
4. Complete potting up operation	<p>4.1. Plants are watered in to eliminate air pockets and prevent dehydration.</p> <p>4.2. Cleaning procedures are performed and hygiene practices followed according to enterprise guidelines.</p> <p>4.3. Waste is collected and disposed of or recycled to minimise damage to the external environment.</p> <p>4.4. Records of potting up operations are maintained in the appropriate format.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- prepare tools, equipment, media and plants
- handle plants with care
- grade plants for quality
- apply different types of potting media
- measure out media components accurately
- produce a uniform media level in the pot
- use and maintain tools
- disinfect selected work areas
- treat common problems of plants in a controlled environment
- participate in teams and contribute to team objectives
- interpret work procedures
- maintain required records
- minimise damage of waste products on the environment
- use literacy skills to follow sequenced written instructions and record information

REQUIRED SKILLS AND KNOWLEDGE

accurately and legibly

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- appropriate use of personal protective equipment
- properties of relevant potting media
- basic plant physiology
- enterprise plants and their characteristics
- hygiene and quality control
- common problems in a controlled environment
- methods of disposing of waste.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare tools, equipment and plants for potting up
- prepare growing media for potting up plants
- pot up plants to required specification
- carry out follow-up procedures to potting up.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

EVIDENCE GUIDE

	enterprise circumstances.
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Potting up plants may include:

transplanting of established plants with developed root systems sown from:

- seed
- from cuttings
- layering
- growing on tissue cultured plants
- division or splitting
- spores
- cloning, and budding or grafting into larger appropriate sized containers of growing media.

Unit Sector(s)

Unit sector	Nursery
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCNSY202A Tend nursery plants

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of tending containerised nursery plants and defines the standard required to: establish the requirements of plants; monitor irrigation and temperature control systems; maintain nursery hygiene; monitor plants; maintain nursery records; implement procedures for waste disposal and tool maintenance.
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Application of the Unit

Application of the unit	This unit applies to the process of tending containerised nursery plants in production nurseries. It relates to working under routine supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required. Maintenance of nursery plants usually follows established enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain the nursery environment	<p>1.1. Occupational Health and Safety (OHS) hazards in the nursery environment are identified, risks assessed and reported to the supervisor.</p> <p>1.2. Plant growth and health requirements are clarified with the supervisor.</p> <p>1.3. Irrigation system components are serviced for basic operational use and basic user serviceable parts are repaired or replaced.</p> <p>1.4. Performance of the irrigation system is checked to ensure optimum results.</p> <p>1.5. Temperature controls are monitored to ensure specified levels are maintained.</p> <p>1.6. Hygiene practices are followed to minimise risk of contamination.</p>
2. Maintain nursery plants	<p>2.1. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p> <p>2.2. Common problems in nursery plants are recognised, and rectified and/or reported to the supervisor.</p> <p>2.3. Tools and equipment are selected and used for plant maintenance.</p> <p>2.4. Treatments are applied to assist plant growth as directed by the supervisor.</p> <p>2.5. Water is applied in the quantity and method specified.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.6. Nursery operations are undertaken according to OHS requirements. 2.7. Plant quality is maintained.
3. Complete nursery plant maintenance operation	3.1. Workplace information is recorded in the appropriate format. 3.2. Waste is collected and disposed of or recycled. 3.3. Tools and equipment are cleaned and stored.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- recognise common problems in nursery plants
- monitor temperature controls
- apply plant growth treatments as directed
- apply specified watering
- select and use tools and equipment
- check irrigation system performance
- service basic irrigation system components
- repair or replace user serviceable irrigation components
- maintain nursery hygiene
- participate in teams and contribute to team objectives
- read and interpret enterprise work procedures
- communicate effectively with team members and supervisor
- measure quantities and calculate application rates
- minimise environmental disturbance
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- daily water requirements of nursery plants
- botany and plant physiology
- environmental requirements of a range of containerised plants growing in a nursery setting
- applied understanding of the importance of hygiene and quality control when

REQUIRED SKILLS AND KNOWLEDGE

- tending nursery plants
- common problems that may occur with containerised plants in a controlled environment and their treatment
 - Nursery Industry Water Management Best Practice Guidelines 2005
 - principles and operations of a range of irrigation systems used in nurseries
 - methods of disposing of waste to minimise damage to the external environment.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- establish the requirements of plants
- monitor irrigation and temperature control systems
- maintain nursery hygiene
- monitor plants
- maintain nursery records
- implement procedures for waste disposal and tool maintenance.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Nursery environments may include:	<ul style="list-style-type: none"> • glasshouses • shade houses • hardening-off areas.
Plants may include:	<ul style="list-style-type: none"> • plants common in production nurseries and commonly used and produced in the region.
Plant physiological processes may include:	<ul style="list-style-type: none"> • principles of transpiration • water intake • nutrient uptake • photosynthesis • respiration • translocation.

Unit Sector(s)

Unit sector	Nursery
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCNSY203A Undertake propagation activities

Modification History

Release	TP Version	Comments
2	AHC10v5	Included missing information in Required Skills and Knowledge
1	AHC10	Initial release. Supersedes and is equivalent to RTC2026A

Unit Descriptor

Unit descriptor	This unit covers the process of undertaking propagation activities and defines the standard required to: collect and maintain suitable plant material; apply a range of propagation techniques; maintain and monitor propagated plants; maintain plant hygiene.
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Application of the Unit

Application of the unit	This unit applies to the process of carrying out a range of propagation tasks, such as preparing plant stock, collecting propagation materials, pre-planting treatments and basic plant propagation techniques. This standard involves working within routine methods and procedures under supervision with intermittent checking. Responsibility for some roles and coordination within a team may be required.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for plant propagation	1.1. Workplace information is interpreted and clarified according to instructions. 1.2. Occupational Health and Safety (OHS) hazards in the work area are identified, rectified and/or reported. 1.3. Suitable Personal Protective Equipment (PPE) is selected, used, maintained and stored. 1.4. Tools and equipment appropriate to the task being undertaken are selected and prepared according to written guidelines. 1.5. Propagation material is collected using the appropriate method for the species. 1.6. Propagation material is maintained and stored to ensure maximum viability.
2. Propagate plants	2.1. Pre-treatment is applied and/or carried out appropriate to the propagation method and species. 2.2. Propagation techniques are carried out according to

ELEMENT	PERFORMANCE CRITERIA
	<p>the requirements of the species.</p> <p>2.3. Propagation material is handled in a way that minimises damage and maximises viability.</p> <p>2.4. Water and nutrients are applied to suit the media conditions, plant requirements and propagation techniques employed.</p> <p>2.5. Labels are applied according to enterprise guidelines.</p> <p>2.6. Plant health is monitored and remedial action is taken according to written guidelines.</p> <p>2.7. Propagation activities are carried out according to OHS requirements.</p>
3. Complete propagation activities	<p>3.1. Records are completed accurately and at the required time according to written guidelines.</p> <p>3.2. Tools and equipment are cleaned and stored according to manufacturer specifications.</p> <p>3.3. Waste is removed and hygiene practices are followed according to enterprise and OHS requirements.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect propagation material
- maintain environmental parameters and temperature controls
- apply pre-treatments
- carry out a variety of propagation techniques
- minimise damage and maximise viability
- apply water and nutrients
- read and interpret instructions
- participate in teams and contribute to team objectives
- communicate effectively with fellow team members
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- propagation methods required for a range of plant species
- enterprise hygiene requirements
- quality specifications/characteristics of a range of parent plants and propagation materials
- basic plant nutrition
- botany and physiology
- maintenance requirements of tools and equipment used for propagation
- OHS requirements of employees
- record keeping relevant to the work function
- enterprise requirements for handling and disposal of nursery wastes
- common problems that may occur while performing propagation activities in a controlled environment
- OHS legislative requirements and Codes of Practice
- OHS procedures.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- collect suitable plant material
- successfully apply a range of propagation techniques
- maintain and monitor propagated plants
- maintain plant hygiene.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

EVIDENCE GUIDE	
	enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Propagation techniques may include:	<ul style="list-style-type: none"> • seed - (small seed sown in modules and pricked out or sown in seedbeds by hand) • cuttings - (hardwood stem, semi-ripe stem, leaf, root) • simple layering • growing on tissue-cultured plants • division or splitting • spores.
Propagation techniques does not include:	<ul style="list-style-type: none"> • budding and grafting.

Unit Sector(s)

Unit sector	Nursery
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCNSY301A Maintain nursery plants

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the work undertaken to maintain nursery plants and defines the standard required to: calculate daily water needs; recognise stages of plant growth; monitor plant health; integrate range of plant maintenance activities; monitor the effects of plant interventions; prepare, mix and use chemicals as required.
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Application of the Unit

Application of the unit	This unit applies to the process of monitoring and maintaining plants in a retail or production nursery.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Monitor and maintain the nursery environment	<p>1.1.Environmental parameters are monitored against the needs of the plants and enterprise guidelines.</p> <p>1.2.Environmental parameters are altered, as required, to meet the needs of nursery plants and market requirements.</p> <p>1.3.Irrigation system components are serviced for basic operational use and basic user serviceable parts are repaired or replaced.</p>
2. Determine daily water requirements	<p>2.1.Water requirements are determined according to the needs of the plant and environmental parameters.</p> <p>2.2.Water is applied according to the needs of the plant group.</p> <p>2.3.Water requirements of the plant are monitored according to enterprise guidelines.</p>
3. Promote plant growth by intervention	<p>3.1.Potting media is tested in production areas to ensure quality specifications are met.</p> <p>3.2.Health of the plant is monitored according to enterprise guidelines.</p> <p>3.3.Plant interventions are undertaken according to marketing plans, appropriate stage of plant growth for the particular intervention, and Occupational Health and Safety (OHS) requirements.</p> <p>3.4.Waste is disposed of with full consideration of the environmental implications.</p> <p>3.5.Records are kept on all maintenance activities according to enterprise requirements.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- select, fit and use appropriate personal protective equipment
- calculate daily water needs
- recognise stages of plant growth
- monitor plant health
- integrate range of plant maintenance activities
- monitor the effects of plant interventions
- prepare, mix and use chemicals as required
- service basic irrigation system components
- repair or replace user serviceable irrigation components
- interpret and record required workplace information
- operate irrigation systems
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- effects of environmental parameters on plant growth
- methods of calculating daily water needs
- relationship between plant water needs and environmental parameters
- characteristics of various types of potting media
- factors affecting the growth of nursery plants
- optimum growing conditions for a range of plants in a nursery
- quality parameters for a range of nursery plants
- symptoms of unhealthy plants
- common problems that occur with nursery plants and their treatment
- botany and plant physiology
- effect of different pruning and intervention methods
- processes for modifying environmental parameters
- phenological stages of plant growth
- treatments required by plants at different phenological stages and environmental parameters
- principles and operations of a range of irrigation systems used in nurseries

REQUIRED SKILLS AND KNOWLEDGE

- OHS hazards and the associated risks when maintaining plants
- environmental impacts of applying plant interventions
- Nursery Industry Water Management Best Practice Guidelines 2005.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- calculate daily water needs
- recognise stages of plant growth
- monitor plant health
- integrate range of plant maintenance activities
- monitor the effects of plant interventions
- prepare, mix and use chemicals as required.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

RANGE STATEMENT	
Plants may include:	<ul style="list-style-type: none"> a wide range of plants common in production and retail nurseries and commonly used and produced in the region.
Plant cultural practices may include:	<ul style="list-style-type: none"> practices relevant to maintenance activities in diverse environments and a varying ability to control the environmental parameters.
Plant physiological processes may include:	<ul style="list-style-type: none"> principles of transpiration, water intake, nutrient uptake, photosynthesis, respiration and translocation.

Unit Sector(s)

Unit sector	Nursery
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCNSY302A Receive and dispatch nursery products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of facilitating client orders for products and the receiving and dispatching of plants and other nursery products from a production or retail nursery and defines the standard required to: communicate with client and advise on product; select and evaluate individual product quality; fulfil orders for nursery products in quantity and meet client quality requirements; maintain stock inventory; advise on nursery product availability and record sales quantities of product; record financial details of transactions.
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Application of the Unit

Application of the unit	This unit applies to the process of selection and collection of product for the purpose of dispatch, delivery or pickup by client and the process of receiving and processing of products from suppliers. Some discretion and judgement may be required in relation to the selection, presentation and preparation for transportation of particular nursery products. Receiving and dispatching involves the application of a diverse range of knowledge in horticulture, warehousing, storage and transportation techniques.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select product for an order	<p>1.1. Materials, equipment and Personal Protective Equipment (PPE) required for the job are selected and used.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified and reported and suitable risk controls implemented.</p> <p>1.3. Product is selected from stock batches in accordance with order forms or by client request.</p> <p>1.4. Clients onsite are assisted with selection or directed to particular product or display areas.</p> <p>1.5. Quality of product is evaluated visually to meet the standard order requirements for quality.</p> <p>1.6. Special order requirements are detailed on the order forms or requested verbally.</p> <p>1.7. Stockholding areas are blocked up for presentation.</p> <p>1.8. Volume of product remaining is observed and information is retained to inform other clients.</p>

ELEMENT	PERFORMANCE CRITERIA
2. Maintain the stock inventory	2.1.Orders are collated in the sales/dispatch area. 2.2.Orders are checked for enterprise quality of a sales product and for accuracy in quantity. 2.3.Records are kept of outgoing sales in the product inventory by manual or electronic means. 2.4.Adjustments are made in the inventory about the quantity of nursery stock available for sale.
3. Prepare for dispatch or delivery	3.1.Product is checked for correct labelling and incorrect labelling is replaced. 3.2.Product is packaged for delivery and presentation to the client. 3.3.Product is packed into containers for ease of handling. 3.4.Delivery of product is assisted by loading and stacking product according to the configuration of the transportation vehicle. 3.5.Product quality is checked at each stage in the delivery process. 3.6.Sales/dispatch areas and packing/packaging materials are maintained and tidied.
4. Receive products	4.1.Incoming product is received and checked for quality and correct quantities. 4.2.Product is transferred to stock holding areas with appropriate manual handling techniques. 4.3.Incoming documentation, receipts of delivery and invoices are transferred to administration.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with clients, suppliers and work team members
- interpret order forms
- select product for order requirements
- evaluate product quality

REQUIRED SKILLS AND KNOWLEDGE

- meet client service requirements
- maintain product records accurately, either manually or on a computer
- use a calculator
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- environmental controls necessary for transporting plants
- common sources of cross contamination from transport vehicles
- enterprise quarantine policies and relevant quarantine legislation
- enterprise stock control procedures
- best practice guidelines for nursery hygiene
- enterprise quality standards for the packing, packaging and labelling of products.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- communicate with client and advise on product
- select and evaluate individual product quality
- fulfil orders for nursery products in quantity and meet client quality requirements
- maintain stock inventory
- advise on nursery product availability
- record sales quantities of product and record financial details of transactions.

Context of and specific resources for

Competency requires the application of work practices

EVIDENCE GUIDE**assessment**

under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Nursery products may include:

- the range of retail products and production nursery stock.

Unit Sector(s)**Unit sector**

Nursery

Co-requisite units**Co-requisite units**

Competency field**Competency field**

AHCNSY306A Implement a propagation plan

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of plant propagation by both sexual and asexual methods and defines the standard required to: prepare tools and propagation materials for work; prepare workspaces for propagation activities; use a range of propagation methods to produce new crops; place or prepare for placing newly propagated material in appropriate growing environment; record propagation activities.
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Application of the Unit

Application of the unit	This unit applies to the process of implementing a propagation plan and involves working within routine methods and procedures under limited supervision, with checking only related to overall progress. Some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for propagation activities	<p>1.1. Workplace information is interpreted and tasks organised to achieve daily work routine within time constraints.</p> <p>1.2. Tools, equipment and machinery are selected according to propagation method and enterprise work procedures.</p> <p>1.3. Growing environment is prepared to suit species and propagation method.</p> <p>1.4. Hygiene practices are implemented according to enterprise guidelines.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p>
2. Select propagation material	<p>2.1. Parent plant is identified and selected according to health, vigour and desired characteristics.</p> <p>2.2. Propagation material is selected and collected according to the propagation method, and species.</p> <p>2.3. Conditioning and storage requirements are selected to ensure maximum viability of propagating material.</p>
3. Prepare propagating media	<p>3.1. Media components are selected according to manufacturer directions, enterprise guidelines, propagation method and plant needs.</p> <p>3.2. Propagation media is tested to ensure the product complies with media specifications.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. Media and components are handled according to OHS requirements. 3.4. Storage requirements for the unused propagation media are selected.
4. Propagate plants	4.1. Propagation material is prepared according to the propagation method and species. 4.2. Propagation techniques are performed according to plant species and documented guidelines. 4.3. Plants are handled in a way that minimises damage. 4.4. Aftercare is applied to suit the media conditions, plant requirements and propagation techniques employed.
5. Complete propagation operations	5.1. Ensure work site is cleaned according to hygiene requirements. 5.2. Waste is collected and disposed of or recycled to minimise damage to the external environment in accordance with enterprise guidelines. 5.3. Records are completed accurately and at the required time according to documented guidelines.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- select appropriate propagation material
- identify and assess hazards in the work area
- recognise and rectify problems and anomalies with parent plants, propagation material, propagation media, equipment and materials
- use propagation techniques for a range of plants
- use a diversity of propagation techniques
- prepare, mix and use chemicals as required
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening,

REQUIRED SKILLS AND KNOWLEDGE

clarifying information and consulting with supervisors as required

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- quality specifications for parent plants and propagation materials
- enterprise and industry hygiene standards required for propagation activities
- common problems that may occur while performing propagation activities in a controlled environment, and preventative/corrective action that may apply
- propagation techniques required for a range of plants
- aftercare requirements for a range of propagated plants
- testing methods applied to propagation media
- preferred types of propagation media for different species.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare tools and propagation materials for work
- prepare workspaces for propagation activities
- use a range of propagation methods to produce new crops
- place or prepare for placing newly propagated material in appropriate growing environment
- record propagation activities.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources

EVIDENCE GUIDE

	for some worksites may differ due to the regional or enterprise circumstances.
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Methods of propagation may include:

- sexual and asexual methods of propagation including tissue culture.

Propagation material may include:

- seeds
- cuttings
- spores
- rootstock
- scion
- rootlings
- buds
- separations/divisions
- tissue cultures
- rhizomes
- plantlets.

Propagating media may include:

- sand
- potting mix
- agar
- gravel
- scoria
- rock wool
- gro-wool
- sawdust
- pine bark
- perlite
- vermiculite
- water (hydroponics).

Unit Sector(s)

Unit sector	Nursery
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCNSY401A Plan a growing-on program

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers planning a growing-on program and defines the standard required to: determine requirements for growing-on program; schedule potting program; develop budgets and plans for a growing-on program; and monitor the implementation of the program.
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Application of the Unit

Application of the unit	This unit applies to production nursery managers.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify issues affecting the growing-on program	1.1. Production requirements are determined in consultation with management. 1.2. Factors that could limit the production of nursery plants are identified. 1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented. 1.4. The environmental implications in relation to a growing-on program are considered. 1.5. Sustainable practices are incorporated into the plan.
2. Develop the growing-on plan	2.1. Activities involved in the growing-on program are identified. 2.2. Labour, materials, tools and equipment needs are identified. 2.3. Environmental parameters are selected and altered to meet plant needs and production plans. 2.4. Growing media requirements are determined according to the needs of the plant and production plans. 2.5. Planting dimensions and layout are determined according to production plans. 2.6. Treatments required for the growing-on program are identified. 2.7. Hygiene requirements for the growing-on program are identified according to industry best practice.
3. Document the growing-on plan	3.1. The growing-on plan is documented, including all information identified in the development stage. 3.2. A budget supporting the plan is documented and approval sought by management. 3.3. A schedule of activities is organised according to production plans. 3.4. The growing-on plan and schedule of activities are communicated clearly to staff.

ELEMENT	PERFORMANCE CRITERIA
4. Oversee and monitor the growing-on program	4.1. The health of the plants is monitored to ensure they are at optimum growth. 4.2. Treatments are modified as required to maintain optimum growth. 4.3. Plants ready for dispatch are checked to ensure they meet customer specifications.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- conduct literature and consultative research to obtain information about production requirements, growth conditions and marketing implications
- negotiate, budget and document plans
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- Worksafe Australia criteria for the labelling and handling of hazardous substances
- enterprise and industry hygiene standards required for growing-on activities
- environmental implications of the disposal of chemicals or chemical containers, and the drainage of high nutrient effluent
- optimal growing requirements of nursery plants
- enterprise and industry quality standards of nursery plant production
- common problems that may occur while performing growing-on activities in a controlled environment and preventative/corrective actions that may apply
- processes and techniques for preparing, costing and documenting plans for and scheduling growing-on activities

REQUIRED SKILLS AND KNOWLEDGE

- testing methods applied to propagation media
- preferred types of propagation media for different species
- chemical, cultural and biological pest, weed and disease control techniques
- application techniques for chemical and non-chemical intervention or treatments.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine requirements for growing-on program
- schedule potting program
- develop budgets and plans for a growing-on program
- monitor the implementation of the program.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Nursery plants may include:

- seedlings
- bulbs

RANGE STATEMENT	
	<ul style="list-style-type: none"> • divisions • containerised plants • field-grown plants • flowering plants • foliage plants • grafted plants • tissue culture plants • stock plants.

Unit Sector(s)

Unit sector	Nursery
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCNSY402A Plan a propagation program

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers planning a propagation program and defines the standard required to: determine propagation techniques and resources required; select propagation materials and media and determine optimal environmental conditions; determine plant hygiene requirements; review propagation plan by monitoring strike rate and health and quality of propagated plants; negotiate and document plans.
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Application of the Unit

Application of the unit	This unit applies to plant propagators.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Carry out preliminary planning activities for a plant propagation program	<p>1.1. Management and marketing requirements are confirmed and understood.</p> <p>1.2. Space requirements for propagation program are evaluated.</p> <p>1.3. Propagation techniques are determined according to species and sound horticultural practice.</p> <p>1.4. Environmental parameters that impact on propagation are determined.</p> <p>1.5. Budget for the propagation program is negotiated with management.</p> <p>1.6. Occupational Health and Safety (OHS) hazards associated with the propagation program are identified, risks assessed and controls implemented.</p>
2. Develop the propagation plan	<p>2.1. Labour, materials, equipment and machinery needs are identified.</p> <p>2.2. Propagation media requirements are determined according to the propagation method and needs of the plant.</p> <p>2.3. Strategies to modify environmental conditions are determined according to the type of plant and propagation method used.</p> <p>2.4. Selection criteria for the propagation material are determined according to the type of plant and propagation method.</p> <p>2.5. Hygiene requirements for propagation activities are determined.</p> <p>2.6. Propagation plan is documented and schedule of</p>

ELEMENT	PERFORMANCE CRITERIA
	activities are communicated clearly to staff.
3. Monitor success of propagation activities	3.1. Variances from plan and scheduled activities are identified and recorded. 3.2. Propagated plants are assessed for health, quality and viability according to enterprise quality standards. 3.3. Remedial procedures are planned to meet marketing objectives and business imperatives.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- plan a propagation program applies to the
- conduct literature and consultative research to obtain information about propagation requirements, growth conditions, and marketing implications
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- OHS hazards associated with undertaking propagation activities, and the controls necessary to remove or minimise risks associated with them
- practical understanding of the OHS and environmental issues associated with use and disposal of propagation media
- enterprise and industry hygiene standards required for propagation activities, including relevant quarantine regulations
- industry and enterprise quality specifications for parent plants and propagation materials
- common problems that may occur while performing propagation activities in a

REQUIRED SKILLS AND KNOWLEDGE

- controlled environment, and preventative/corrective action that may apply
- processes and techniques for preparing, costing and documenting plans for and scheduling propagation activities
 - identification, propagation and establishment techniques required for a range of plant varieties and cultivars
 - monitoring staff performance
 - Plant Breeders Rights (PBR) and related legislation
 - aftercare requirements for a range of propagated plant varieties and cultivars
 - testing methods applied to propagation media
 - preferred types of propagation media for different species
 - chemical, cultural and biological pest, weed and disease control techniques
 - application techniques for chemical and non-chemical intervention or treatments.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine propagation techniques and resources required
- select propagation materials and media and determine optimal environmental conditions
- determine plant hygiene requirements
- review propagation plan by monitoring strike rate and health and quality of propagated plants
- negotiate and document plans.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

EVIDENCE GUIDE

enterprise circumstances.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Propagation techniques may include:

- seed
- cuttings
- layering
- growing on tissue cultured plants
- division or splitting
- budding
- grafting
- spores
- cloning.

Unit Sector(s)**Unit sector**

Nursery

Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCPGD402A Plan a plant establishment program

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of developing a plant establishment program and a relevant site plan and specifications, and defines the standard required to: develop a concept plan that reflects client needs, site factors and the growing requirements of plants; select the plant species and cultivars, and the required quantities of plant material and other resources; develop and document detailed site plan, specifications and quotation; detail on-site procedures for implementing the plan and maintaining the site.
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Application of the Unit

Application of the unit	This unit applies to those whose job role includes planning a plant establishment programs.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Carry out preliminary planning activities for the plant establishment program	<p>1.1. Client preferences and requirements for the plant establishment program are understood and confirmed.</p> <p>1.2. The plant establishment site is assessed for legal attributes, biophysical factors, services and historical modifications.</p> <p>1.3. Research is conducted into plant species and cultivars, and local by-laws and restrictions that may affect the plant establishment program.</p> <p>1.4. Environmental implications of the planned programs are identified and if necessary, reported to relevant personnel for further research.</p> <p>1.5. A concept plan that reflects client preferences and requirements, takes into account site factors and any identified environmental requirements, is developed and presented to the client for discussion and approval.</p>
2. Determine requirements of the plant establishment program	<p>2.1. Plant species and cultivars that are appropriate to the site and consistent with the agreed concept plan are identified, and the required quantity calculated, costed, and availability confirmed with suppliers.</p> <p>2.2. Plant establishment procedures are selected consistent with the agreed concept plan, and according to the characteristics of available plant materials, the resources and equipment available, and the environmental factors affecting the success of the plant establishment program.</p> <p>2.3. Post-planting care is provided for according to client</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>requirements, enterprise standards and site capabilities.</p> <p>2.4. Resources, tools, equipment and machinery required for planting and post-planting care are identified, costed, and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.5. Occupational Health and Safety (OHS) hazards associated with the plant establishment program are identified; risks assessed and controls developed according to enterprise guidelines, costed and documented in the plan.</p> <p>2.6. Staged implementation and development are outlined, where appropriate, with access for future works provided for according to client, enterprise and site requirements.</p> <p>2.7. Timelines for preparations, planting and post-planting care are determined taking into account the needs of the plant species and cultivars, site conditions, and any other planning requirements.</p>
3. Prepare and document the plant establishment program and specification	<p>3.1. Detailed plan, specifications and quotation are prepared based on the requirements of the plant establishment program, and presented to appropriate personnel and the client for acceptance.</p> <p>3.2. Scaled site plan is produced which can be readily interpreted and understood by on-site personnel according to enterprise standards.</p> <p>3.3. Detailed on-site procedures and schedules required for the planting of the site and post-planting care of plants are developed and documented.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- comply with legislative requirements
- document plans, specifications and work procedures, and write reports for the understanding of staff, clients and contractors

<p>REQUIRED SKILLS AND KNOWLEDGE</p> <ul style="list-style-type: none"> • calculate the cost and spatial and logistical requirements of components of the plant establishment program • use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks • use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views • use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data • use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.
<p>Required knowledge</p> <ul style="list-style-type: none"> • identification, propagation and establishment techniques of specific plant species and cultivars • the advantages and disadvantages of a range of plant establishment procedures • maintenance requirements and practices for specific plant species and cultivars, prior to and after initial establishment • processes and techniques for preparing, costing and documenting plans for and scheduling plant establishment activities.

Evidence Guide

<p>EVIDENCE GUIDE</p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • develop a concept plan that reflects client needs, site factors and the growing requirements of plants • select the plant species and cultivars, and the required

EVIDENCE GUIDE	
	<p>quantities of plant material and other resources</p> <ul style="list-style-type: none"> • develop and document detailed site plan, specifications and quotation • detail on-site procedures for implementing the plan and maintaining the site.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Establishment sites may include:	<ul style="list-style-type: none"> • large-scale or broad acre woodlots • revegetation areas • parks and gardens • landscaped areas • recreational reserves • sports turf or recreational turf surfaces • commercial nursery, floriculture and production horticulture sites.
Plant species and cultivars may include:	<ul style="list-style-type: none"> • exotic • native • endemic • evergreen • deciduous • conifer and palm trees and shrubs • turf • grasses • ground cover plants • bedding displays • aquatic plants.

Unit Sector(s)

Unit sector	Parks and gardens
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCPT503A Manage a controlled growing environment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of managing controlled growing environments, and defines the standard required to: identify the growing requirements of the crop; prepare specifications for controlled growing infrastructure; develop a management plan to cover staff training, budgets, operating procedures and remedial actions; develop environmental monitoring procedures; and evaluate and document the achievements towards management objectives.
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Application of the Unit

Application of the unit	This unit applies to the management of a horticultural production site consisting of one or several controlled growing environments. The work is usually undertaken without supervision, with only general guidance on progress sought by senior management. Responsibility for the work of others may be involved and team coordination may be required. Management of controlled growing environments requires extensive horticultural knowledge and practical skills, particularly in plant physiology and growth needs, controlled environment systems, monitoring, reporting and forward planning.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify crop requirements	<p>1.1.Crop growth and production requirements are determined according to a documented production plan.</p> <p>1.2.Environmental parameters for optimal growing conditions for the specific crop are researched using available information resources.</p> <p>1.3.Controlled growing environment factors are identified, evaluated and recorded.</p>
2. Determine requirements for controlled growing environment	<p>2.1.Structures, machinery, equipment and resources required to control environmental conditions are identified, costed and availability confirmed.</p> <p>2.2.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</p> <p>2.3.Detrimental environmental impacts associated with the controlled growing environment system are identified and controls sanctioned.</p>
3. Prepare a	3.1.Management objectives for controlled growing

ELEMENT	PERFORMANCE CRITERIA
management plan for controlled growing environment	<p>environment are determined consistent with production plan and market requirements for crop quantity and quality.</p> <p>3.2.A schedule of environmental control procedures is developed according to controlled environment management objectives.</p> <p>3.3.Staff training needs are evaluated in regard to operation and maintenance of environmental control systems, and reported.</p> <p>3.4.A budget supporting the controlled environment management plan is documented and approval sought.</p> <p>3.5.The schedule of environmental control procedures is communicated clearly to staff.</p>
4. Manage controlled growing environment	<p>4.1.Controlled environment indicators and thresholds for remedial action are identified for monitoring according to industry best practice.</p> <p>4.2.Monitoring frequency and schedule is developed according to the requirements of the production plan and communicated clearly to staff.</p> <p>4.3.All monitoring data is recorded, analysed and applied to management of the controlled environment system to ensure optimal plant development.</p> <p>4.4.Remedial action undertaken is documented and reported.</p> <p>4.5.Costs of the controlled growing environment system are monitored against budget.</p> <p>4.6.Budget adjustments are recorded and reported.</p> <p>4.7.Recorded information, budget data and production outputs are evaluated and operational achievements towards management objectives are documented in a report.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- research information using available technology
- evaluate training needs
- assess risk
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- plant physiology and biochemistry
- techniques and methods of implementing optimal growing conditions for a range of horticultural crops
- controlled environmental conditions in regard to crop plant physiology, growth stages, and product quality and quantity
- quality production methods and techniques for a range of controlled environment plants
- legislation and regulations relating to the controlled environment systems
- market requirements for crop quantity and quality
- monitoring, analysis and recording systems
- staff training requirements.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE	
evidence required to demonstrate competency in this unit	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • identify the growing requirements of the crop • prepare specifications for controlled growing infrastructure • develop a management plan to cover staff training, budgets, operating procedures and remedial actions • develop environmental monitoring procedures • evaluate and document the achievements towards management objectives.
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Plants may include:	<ul style="list-style-type: none"> • flower • foliage crops • oil crops • vegetables • fruit • nuts • mushroom crops • containerised plants • open-rooted grown plants.
Growing environment factors may include:	<ul style="list-style-type: none"> • relevant aspects of ambient humidity • light • growing media mean temperature • season and day length • air quality • nutrient and dissolved gas availability • toxicities and deficiencies

RANGE STATEMENT	
	<ul style="list-style-type: none"> • weeds • pests • diseases and beneficial organisms • site aspect and slope • natural and artificial water supplies.

Unit Sector(s)

Unit sector	Production horticulture
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCPMG201A Treat weeds

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of treating weeds and defines the standard required to: identify significant weed species for the enterprise; apply a range of weed treatment control options; recognise and control risks to environment (including spray drift and chemical spillage); clean and store equipment correctly; monitor treatment site; record weed treatment.
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Application of the Unit

Application of the unit	This unit applies to supervised workers in agriculture, horticulture and land management who carry out the process of treating weeds and is carried out following specific work instructions.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to treat weeds	<p>1.1. Weeds which impact on commercial crops, gardens and turf, and natural areas are recognised by common name.</p> <p>1.2. Details of the weed occurrence are recorded and reported to the supervisor.</p> <p>1.3. Treatment methods are selected in consultation with the supervisor.</p> <p>1.4. Equipment is selected and prepared for use according to enterprise guidelines and manufacturers specifications.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p>
2. Treat weeds	<p>2.1. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>2.2. Treatments are prepared according to supervisor's instructions and manufacturer's guidelines.</p> <p>2.3. Treatments are applied in such a way that non-target damage is minimised.</p> <p>2.4. Treatments are applied according to OHS and environmental regulatory requirements.</p>
3. Carry out post treatment operation	<p>3.1. Equipment is shut down and cleaned with full consideration of environmental impacts and OHS requirements.</p> <p>3.2. Treatment waste is disposed of causing minimal environmental damage.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and implement safe work practices
- read and interpret chemical labels, Material Safety Data Sheets (MSDSs), manufacturer's specifications for setting up equipment
- use and maintain PPE
- prepare to treat weeds
- apply weed treatments
- carry out post treatment operations
- maintain spray records
- recognise caution or hazard signs and symbols
- interpret tasks or information from labels, manuals or written instructions
- record information accurately or verbally report information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- recognition of common weeds for a particular enterprise/situation
- weed growth characteristics
- different types of control measures, treatments and their principles
- modes of action of different chemicals
- equipment capability and limitations
- legislation relation to the use of chemicals for weed control
- OHS responsibilities of employers and employees
- OHS legislative requirements and associated hazardous substances regulations and Codes of Practice
- correct wearing/fit of personal protective equipment
- environmental considerations when using chemicals for weed control.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • identify significant weed species for the enterprise • apply a range of weed treatment control options • recognise and control risks to environment (including spray drift and chemical spillage) • clean and store equipment correctly • monitor treatment site • record weed treatment.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Weeds may include:	<ul style="list-style-type: none"> • all plants that are classified as weeds.
Treat weeds may include:	<ul style="list-style-type: none"> • control by cultural, biological and chemical methods.

Unit Sector(s)

Unit sector	Pest management
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCPMG202A Treat plant pests, diseases and disorders

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of treating plant pests, diseases and disorders and defines the standard required to: identify significant plant pests, diseases and disorders for the enterprise; apply a range of control or treatment options; recognise and control risks to environment (including spray drift and chemical spillage); clean and store equipment correctly; observe the treatment site and record plant treatments.
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Application of the Unit

Application of the unit	This unit applies to supervised workers in plant or pasture-based industries and is carried out following strict work instructions and under supervision.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to treat plant pests, diseases and disorders	<p>1.1.Plant pests, diseases and disorders are recognised by common name.</p> <p>1.2.Details of the plant pest, disease and disorder occurrence are recorded and reported to the supervisor.</p> <p>1.3.Treatment methods are selected in consultation with the supervisor.</p> <p>1.4.Equipment is selected and prepared for use according to enterprise guidelines and manufacturer's specifications.</p> <p>1.5.Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p>
2. Apply treatments to plant pests, diseases and disorders	<p>2.1.Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>2.2.Treatments are prepared according to supervisor's instructions and manufacturers guidelines.</p> <p>2.3.Treatments are applied in such a way that non-target damage is minimised.</p> <p>2.4.Treatments are applied according to OHS and regulatory requirements.</p>
3. Carry out post treatment operation	<p>3.1.Equipment is shut down and cleaned with full consideration of environmental impacts.</p> <p>3.2.Treatment waste is disposed of causing minimal environmental damage.</p> <p>3.3.Records are maintained according to enterprise guidelines.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and interpret chemical labels, Material Safety Data Sheets (MSDSs), manufacturer's specifications for setting up equipment
- recognise a range of plant pests, diseases and disorders
- monitor and record the severity of the plant pest or disease problem
- prepare to treat plant pests and diseases
- apply plant pest, disease and disorder treatments
- carry out post treatment operations
- use and maintain PPE appropriate to task
- maintain spray and other treatment records
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- recognition of common plant pests, diseases and disorders for a particular enterprise/situation
- different types of control measures and their principles
- modes of action of different chemicals
- legislation relation to the use of chemicals for plant pest, disease and disorder control
- OHS legislative and enterprise requirements and Codes of Practice
- correct use and maintenance of PPE.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • identify significant plant pests, diseases and disorders for the enterprise • apply a range of control or treatment options • recognise and control risks to environment (including spray drift and chemical spillage) • clean and store equipment correctly • observe the treatment site • record plant treatments.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Plant pests, diseases and disorders may include:	<ul style="list-style-type: none"> • those which impact on commercial crops, pastures, amenity areas, gardens and turf, and natural areas.
Plant pests may include:	<ul style="list-style-type: none"> • chewing, sucking and boring invertebrates • nematodes • fungi • viruses • bacteria.

RANGE STATEMENT	
Plant disorders may include:	<ul style="list-style-type: none"> • toxic soil, air and water.
Plant pests, diseases and disorders does not include:	<ul style="list-style-type: none"> • vertebrate pests • nutrient deficiencies • extreme environmental conditions.

Unit Sector(s)

Unit sector	Pest management
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCPMG301A Control weeds

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the control of weeds and defines the standard required to: identify a range of weeds and beneficial organisms; plan and coordinate weed control activities; prepare and calibrate equipment; conduct a site hazard identification and risk control assessment for weed control; apply a range of weed control methods and maintain records; monitor, record and report the effectiveness of controls.
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Application of the Unit

Application of the unit	This unit applies to workers in agriculture, horticulture or land management-based enterprises who are required to carry out the control of weed infestations using cultural, biological and chemical methods to provide effective, economical control of weeds while minimising damage to the environment.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess weed infestation	<p>1.1. Identify the scope and size of the weed infestation that adversely impacts on the landscape.</p> <p>1.2. Identify weeds and record details of the weeds and beneficial organisms.</p> <p>1.3. Identify tolerable levels of infestation according to client, market, environmental and IPM requirements.</p> <p>1.4. Determine if plant health or growth requirements are compromised by level of infestation.</p> <p>1.5. Seek professional advice if required in the assessment of the weed infestation.</p>
2. Plan control measures	<p>2.1. Determine suitable control options according to Integrated Pest Management principles and industry practice.</p> <p>2.2. Identify the hazards, assess and control risks to others and the environment.</p> <p>2.3. Identify appropriate tools, equipment and machinery for the planned control measure.</p> <p>2.4. Select appropriate Personal Protective Equipment (PPE) in accordance with Occupational Health and Safety (OHS) requirements.</p> <p>2.5. Prepare a control plan for the control measure/strategy.</p>
3. Implement control	3.1. Implement control measures in accordance with IPM

ELEMENT	PERFORMANCE CRITERIA
measures	principles, industry practice and control plan. 3.2.Ensure that control measures minimise non-target damage. 3.3.Maintain records of the control measure/s applied.
4. Monitor control measures	4.1.Monitor control measures to identify signs of adverse impact on humans, animals, non-target plants or environment. 4.2.Assess effectiveness of control measures in accordance with IPM guidelines and/or available industry standards. 4.3.Record assessment of control measures and report to client or organisation.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify a range of weeds and beneficial organisms
- identify threshold level of weeds for treatment
- conduct a site hazard identification and risk control assessment
- prepare a control plan
- use appropriate cultural, biological or chemical controls
- minimise damage to non-target species
- complete records of control treatments
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- economic, aesthetic and environmental threshold for a range of weeds
- IPM principles and strategies
- lifecycle and biology of weeds
- hazard identification and risk assessment methodologies

REQUIRED SKILLS AND KNOWLEDGE
<ul style="list-style-type: none"> • types of control measures (cultural, biological, chemical) commonly used in industry/sector • types of equipment including personal protective equipment appropriate to the control measure • risk factors including human, animal health and environmental associated with a range of control measures/options • OHS requirements pertaining to the use of cultural, biological, chemical agents.

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • identify a range of weeds and beneficial organisms • plan and coordinate weed control activities • prepare and calibrate equipment • conduct a site hazard identification and risk control assessment for weed control • apply a range of weed control methods and maintain records • monitor, record and report the effectiveness of controls.
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Weeds may include:	<ul style="list-style-type: none"> the range of significant and noxious weeds of agricultural and horticultural crops, pastures and native vegetation.

Unit Sector(s)

Unit sector	Pest management
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCPMG302A Control plant pests, diseases and disorders

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of controlling plant pests, diseases and disorders taking into consideration Integrated Pest Management (IPM) options and defines the standard required to: identify a range of pests, diseases and disorders, and beneficial organisms; assess damage or threat to plants; select pest and disease controls and timing of operations; prepare and calibrate equipment; apply a range of pest and disease control methods and keep records; monitor the effectiveness of controls.
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Application of the Unit

Application of the unit	This unit applies to workers in plant-based enterprises or activities and is likely to be under limited supervision from others with checking only related to overall progress. Responsibility for and limited organisation of the work of others may be involved.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess pests and disease infestation	1.1.Scope and size of the infestation is assessed. 1.2.Plants pests, diseases and disorders and beneficial organisms are identified and reported or recorded in field notes. 1.3.Levels of pest infestations tolerated by the client, market or environment are identified from the IPM strategy.
2. Plan the implementation of control measures	2.1.Control measures suitable for the infestation are selected from IPM strategy. 2.2.Tools, equipment and machinery are selected for each work activity according to enterprise work procedures. 2.3.Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented. 2.4.Personal Protective Equipment (PPE) is selected, used and maintained according to procedures. 2.5.Control measures selected need to be in full consideration of OHS and environmental implications.
3. Implement control measures	3.1.Enterprise work team, contractors and IPM product suppliers are coordinated in a sequential, timely and effective manner in consultation with the supervisor. 3.2.Control measures are implemented according to the

ELEMENT	PERFORMANCE CRITERIA
	IPM standards or industry Code of Practice. 3.3.A clean and safe work area is maintained throughout and on completion of each activity. 3.4.Records are maintained as required by legislation and enterprise guidelines.
4. Monitor control methods	4.1.Control methods are monitored to identify side effects to other plants, animals or external environment. 4.2.Effectiveness of control methods are assessed in reference to specified industry, OHS and enterprise standards. 4.3.Adjustments to IPM control methods are implemented where necessary to meet enterprise specifications.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- recognise a range of pests, diseases and beneficial organisms within a particular enterprise
- communicate with work team members, supervisors, contractors and consultants
- understand IPM symbols and information
- interpret and apply an IPM- based program
- utilise proforma reporting, analysis and work procedure documents
- interpret and apply plant pest and disease spatial and logistical specifications
- interpret and apply test results, and calculate the quantities and application rates of control materials
- coordinate work groups, contractors and own activities to sequentially and effectively complete activities in a timely and cost effective manner
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- pests and disease recognition
- economic, aesthetic or environmental thresholds for a range of plant pests, diseases

REQUIRED SKILLS AND KNOWLEDGE
<p>and disorders</p> <ul style="list-style-type: none"> • chemical, biological and cultural control methods and treatments available to the enterprise within the parameters of an IPM program • range and use of tools, equipment and machinery available to the enterprise for implementing the control measures • range of site monitoring and analysis techniques that may be used to implement and IPM program • choice of plant pest and disease methods with site limitations, environmental implications, end market and production or environmental objectives for the site • IPM standards or industry Code of Practice • occupational health and safety responsibilities for employees and employers • correct use and maintenance of personal protective equipment. • OHS and environmental legislative requirements including hazardous substances regulations.

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • identify a range of pests, diseases and disorders, and beneficial organisms • assess damage or threat to plants • select pest and disease controls and timing of operations • prepare and calibrate equipment • apply a range of pest and disease control methods and keep records • monitor the effectiveness of controls.

EVIDENCE GUIDE	
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Pests, diseases and disorders may include:	<ul style="list-style-type: none"> the range of pests, diseases and disorders of plants managed or controlled by using a range of integrated measures of management and control.

Unit Sector(s)

Unit sector	Pest management
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCPMG402A Develop a pest management action plan within a local area

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit covers developing a pest management action plan within a local area and defines the standard required to: determine the lifecycle, distribution and loss of production caused by the pest; document the economic losses and environmental risks and impacts of the pest; develop control measures based on a combination of strategies to control the pest at its most vulnerable stage with minimal environmental impact; establish the costs and benefits of implementing the selected control strategies; select management options to eradicate or manage the pest across a local region; negotiate an action plan to implement the management options across an area or region.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to regional pest management officers and is likely to be undertaken independently, with reference to specialist advice.</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine land management/production objectives	<p>1.1.Land users and other stakeholders are consulted regarding local objectives.</p> <p>1.2.Objectives address major land uses and production activities in the local area affected by the impacts of the target pests.</p> <p>1.3.Objectives relate to the problem definition and the reduction in the pest impacts and associated losses.</p> <p>1.4.Objectives comply with national, state and regional legislation and regulations.</p> <p>1.5.Objectives support strategies for land and pest management.</p>
2. Estimate costs and advantages for management units	<p>2.1.The diversity of land management and production values that the target pests affect within the local area is defined.</p> <p>2.2.The likely costs of preferred options for control of pest populations and/or changes to land management or production activities associated with each value are estimated.</p> <p>2.3.The likely costs are compared with the impacts and losses caused by the target pests.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4.The management units most affected, both actually and potentially, by the target pests are defined and prioritised.
3. Define the performance level for each land management/production objective	3.1.Performance levels are defined in accordance with sustainable land use principles to address target pests population levels, economic impacts and environmental impacts. 3.2.Performance levels are realistic and measurable.
4. Select management options for the target pests	4.1.Options for controlling pest populations and/or changing land management or production practices are assessed in terms of economic factors, technical difficulty, practical feasibility, social and/or environmental acceptability. 4.2.A range of management options are assessed in terms of current and future financial support, when control activities are to be implemented, level of target pests population reduction required, and the most suitable control methods and techniques. 4.3.A management option is selected in accordance with sustainable land use principles, economic feasibility, environmental acceptability, Integrated Pest Management (IPM) principles, and statutory requirements for pest control.
5. Negotiate possible actions with relevant stakeholder	5.1.The action is based on the definition of the problem using data from measurement of abundance and impacts. 5.2.The action clearly documents the pest problem, the objectives, the stakeholders, the prioritised management units, the performance criteria, and the most suitable management options.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and implement safe work practices
- determine land use objectives

REQUIRED SKILLS AND KNOWLEDGE

- estimate costs and advantages for areas affected by the target pest/s
- define performance levels for pest management for each land use
- select management control options for the target pest/s
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- relevant local, regional, state and national strategies for pest management including those for individual species
- motivational effects of stakeholder involvement
- community facilitation processes
- local land management process
- relevant legislative and regulatory requirements including statutory requirements for pest control
- environmental protection legislation
- principles of IPM
- pest control methods and techniques
- defining local land management and production values
- determining cost benefit analysis of management options
- sustainable land use principles
- Occupational Health and Safety (OHS), environmental and pesticides legislation, codes of practice and enterprise procedures.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • determine the lifecycle, distribution and loss of production caused by the pest • document the economic losses and environmental risks and impacts of the pest • develop control measures based on a combination of strategies to control the pest at its most vulnerable stage with minimal environmental impact • establish the costs and benefits of implementing the selected control strategies • select management options to eradicate or manage the pest across a local region • negotiate an action plan to implement the management options across an area or region.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Action plans may include:	<ul style="list-style-type: none"> • those relating to a range of weeds and vertebrate and invertebrate pests.

Unit Sector(s)

Unit sector	Pest management
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCPMG503A Develop a strategy for the management of target pests

Modification History

Not Applicable

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit covers developing a strategy for the management of target pests and defines the standard required to: determine land management/production objectives; estimate costs and advantages for the management units most affected by the target pests; define and prioritise the management units most affected, both actually and potentially, by the target pests; define the performance criteria for each land management/production objective; select management options for the target pests; negotiate strategies with relevant stakeholders in the affected area.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>This unit applies pest control officers and managers for work carried out independently within organisational guidelines.</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

<p>Prerequisite units</p>		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine land management/production objectives	<p>1.1. Other land users, regional land management bodies, landcare committees and relevant stakeholders are consulted regarding regional and local objectives.</p> <p>1.2. Outcomes of consultation incorporating regional and local objectives are recorded according to enterprise guidelines.</p> <p>1.3. Objectives address major land uses and production activities affected by the impacts of the target pests.</p> <p>1.4. Objectives relate to the problem definition and the reduction in the pest impacts and associated losses.</p> <p>1.5. Objectives comply with national, State and regional strategies for land and pest management.</p>
2. Estimate costs and advantages for the management units most affected by the target pests	<p>2.1. The diversity of land management and production values that the target pests affect within the affected region or area is defined.</p> <p>2.2. The likely costs of preferred options for control of pest populations and/or changes to land management or production activities associated with each value are documented.</p> <p>2.3. The likely costs of control are compared with the impacts and losses caused by the target pests.</p> <p>2.4. The management units most affected, both actually</p>

ELEMENT	PERFORMANCE CRITERIA
	and potentially, by the target pests are defined and prioritised.
3. Define the performance criteria for each land management/production objective	<p>3.1. Performance criteria are defined in accordance with sustainable land use principles to address target pests population levels, economic impacts and environmental impacts.</p> <p>3.2. Performance criteria are realistic and measurable.</p>
4. Select management options for the target pests	<p>4.1. Options for controlling pest populations and/or changing land management or production practices are assessed and documented in terms of economic factors, technical difficulty, practical feasibility, social and/or environmental acceptability.</p> <p>4.2. A range of management options are assessed in terms of current and future financial support, when control activities are to be implemented, level of target pests population reduction required, and the most suitable control methods and techniques.</p> <p>4.3. A management option is selected in accordance with sustainable land use principles, economic feasibility, integrated pest management principles, environmental acceptability, and statutory requirements for pest control.</p>
5. Negotiate strategies with relevant stakeholders in the affected area	<p>5.1. The strategy is based on the definition of the problem using data from measurement of abundance and impacts.</p> <p>5.2. The strategy clearly documents the pest problem, the objectives, the prioritised management units, the performance criteria, and the most suitable management options.</p> <p>5.3. Strategies are agreed and confirmed through relevant stakeholder consultation and negotiation.</p> <p>5.4. Strategies are published and distributed to relevant stakeholders, organisations and interest groups.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- estimate costs and advantages
- plan
- report and document strategies
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- relevant legislative and regulatory requirements
- environmental protection legislation
- pest control methods and techniques
- social and environmental issues
- statutory requirements for pest control
- land use processes, ecological systems and production systems
- pest management options and strategies
- plant and animal identification
- pest biology
- Occupational Health and Safety (OHS) and environmental legislation, codes of practice and enterprise procedures.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and

The evidence required to demonstrate competency in this

EVIDENCE GUIDE	
evidence required to demonstrate competency in this unit	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • determine land management/production objectives • estimate costs and advantages for the management units most affected by the target pests • define and prioritise the management units most affected, both actually and potentially, by the target pests are • define the performance criteria for each land management/production objective • select management options for the target pests • negotiate strategies with relevant stakeholders in the affected area.
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Pests to be targeted may include:</p>	<ul style="list-style-type: none"> • insects • weeds • pathogens • vertebrates • nematodes • molluscs.
<p>Pest management strategies may include:</p>	<ul style="list-style-type: none"> • changing land management or production processes and practices e.g.,: <ul style="list-style-type: none"> • changing lambing times • changing sowing times • changing crops • modifying habitat • pasture management

RANGE STATEMENT	
	<ul style="list-style-type: none"> • pest population control, e.g.: <ul style="list-style-type: none"> • shooting • poisoning • trapping • mustering • relocation • fumigation • sedation • exclusion fencing • biological controls • harvesting • tagging • weed control including: <ul style="list-style-type: none"> • chemical • biological control • mechanical removal.

Unit Sector(s)

Unit sector	Pest management
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCSAW201A Conduct erosion and sediment control activities

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of carrying out erosion and sediment control activities in both urban and rural environments and defines the standard required to: assess risks from erosion and sediment at a site; assemble structures to prevent erosion and control sediment at a site; carry out sediment control activities in accordance with legislation and stakeholder requirements; confirm that erosion and sediment control meets enterprise requirements.
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Application of the Unit

Application of the unit	This unit applies to workers at an operational level involved in earthworks construction and other land forming activities working under routine supervision with intermittent checking by supervisors.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Align work site practices with erosion and sediment control principles	<p>1.1.Erosion and sedimentation legislation is adhered to at the work site as a part of contract works.</p> <p>1.2.Procedures relating to erosion and sediment control are applied on the work site to align with industry standards.</p>
2. Implement erosion and sediment control principles in the workplace	<p>2.1.Breaches of erosion and sediment control legislation are noted and reported.</p> <p>2.2.Industry practices for erosion and sediment control are applied in the work place.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
<ul style="list-style-type: none"> • identify hazards and follow safe operating procedures • identify erosion and sediment control structures/measures/practices • carry out routine work with control measures and structures • identify areas at risk of erosion • undertake activities in accordance with legislation/community expectation and

<p>REQUIRED SKILLS AND KNOWLEDGE</p> <p>project specifications</p> <ul style="list-style-type: none"> • use literacy skills to follow sequenced written instructions and record information accurately and legibly • use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor • use numeracy skills to estimate, calculate and record routine workplace measures • use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.
<p>Required knowledge</p> <ul style="list-style-type: none"> • cost to the community of erosion and sedimentation • loss of habitat • water quality • loss of production/asset/amenity • re-occurring maintenance/repair/monitoring • agents/processes of erosion and sedimentation • types of erosion and sediment control structures and techniques for constructing them • basic catchments issues • role of vegetation • characteristics of soils with an emphasis on erodible soils. • OHS and environmental legislative and enterprise procedures.

Evidence Guide

<p>EVIDENCE GUIDE</p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • assess risks from erosion and sediment at a site

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • assemble structures to prevent erosion and control sediment at a site • carry out sediment control activities in accordance with legislation and stakeholder requirements • confirm that erosion and sediment control meets enterprise requirements.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Control activities may include:	<ul style="list-style-type: none"> • grade stabilising structures • outlet protection structures • storm water detention measures • dust control • revegetation for the purpose of controlling erosion.

Unit Sector(s)

Unit sector	Soil and water conservation
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Co-requisite units

Co-requisite units	

Co-requisite units		

Competency field

Competency field	
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AHCSAW302A Implement erosion and sediment control measures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the construction/installation and maintenance of a range of measures specified on erosion and sediment control plans and defines the standard required to: select and prepare equipment; confirm the details of work; identify survey pegs and site indicators; construct earthworks in line with the plan; install erosion and sediment control products and materials; carry out repairs and maintenance procedures.
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Application of the Unit

Application of the unit	This unit applies to workers who are required to carry out the actions specified on erosion and sediment control plans.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for implementation and construction	1.1.Erosion and sediment control plan and schedule of works match site conditions. 1.2.Survey pegs and site indicators are identified on site. 1.3.Equipment and tools are matched to program works and terrain on site. 1.4.Work readiness of selected equipment and tools are verified in line with contractor policy. 1.5.Materials are selected to complete proposed works in line with construction schedule.
2. Carry out implementation and construction	2.1.Earthworks are constructed in accordance with details specified in the plan and to industry standards. 2.2.Erosion and sediment control products and materials are installed in accordance with manufacturer's recommendation and industry guidelines and plans.
3. Carry out repairs and maintenance procedures	3.1.Site works maintenance inspection schedule is applied to reinstate operating effectiveness of erosion and sediment control measures on site.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and implement safe work procedures
- prepare for implementation and construction
- carry out implementation and construction
- carry out repairs and maintenance procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- materials cartage pollution control
- sequence of working and timing/duration
- Occupational Health and Safety (OHS) issues relating to the equipment and the site
- equipment used
- construct, install and maintain includes materials, quantity and where to source them on site
- construction/installation techniques for all measures on the plan
- limitations of structures including timing of maintenance, structure life cycle, specifications and standards
- environmental impacts and procedures for erosion and sediment control.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

EVIDENCE GUIDE	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • select and prepare equipment • confirm the details of work • identify survey pegs and site indicators • construct earthworks in line with the plan • install erosion and sediment control products and materials • carry out repairs and maintenance procedures.
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Erosion control measures may include:	<ul style="list-style-type: none"> • site management • land shaping • batter stabilisation • banks and channels • level spreader • revegetation • waterways • check dams • bank and channel linings • grade stabilising structures • outlet protection structures • stormwater detention measures • dust control • rural road&track crossbank and crossfall.
Sediment control measures may	<ul style="list-style-type: none"> • sediment basins

RANGE STATEMENT	
include:	<ul style="list-style-type: none"> • sediment traps • sediment filters • excavated sediment traps • straw bale • stormwater inlet sediment traps • sediment fence • straw bale • geotextile fabric • vegetation strips.

Unit Sector(s)

Unit sector	Soil and water conservation
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCWAT502A Manage water systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers managing water systems and defines the standard required to: identify adverse environmental impacts of irrigation activities and appropriate remedial action; determine the feasibility of using or up-grading an irrigation system; install or modify an irrigation and drainage system as necessary; evaluate irrigation system outputs and performance and strategically manage irrigated production systems
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Application of the Unit

Application of the unit	This unit of competency applies to water managers and covers the process of strategically managing an integrated system involving relationships between irrigation, drainage and environmental systems.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine the feasibility of using or up-grading irrigation system	1.1. Water resources and drainage implications are assessed to determine suitability for irrigation. 1.2. Water quality and treatment requirements are determined. 1.3. Water requirements and most suitable application systems are determined for each crop/plant type and area, and for each soil type. 1.4. Other water requirements, such as climate control, are determined. 1.5. Soil types are assessed to determine suitability for irrigation and the range of crop/plant types that could be grown. 1.6. Drainage requirements are determined in relation to each soil and crop/plant type and type of irrigation system. 1.7. Performance data, audit reports, environmental and Occupational Health and Safety (OHS) data for existing systems are assessed if available. 1.8. Information is obtained from irrigation specialists on all relevant aspects of irrigation design. 1.9. Available irrigation system types and components are assessed and costed, and a decision is made on the particular system to be used or upgrades to existing system.
2. Install or modify an irrigation and drainage system as necessary	2.1. Materials and equipment making up the system are determined and acquired. 2.2. Irrigation system is installed using advice, as

ELEMENT	PERFORMANCE CRITERIA
	<p>necessary, from irrigation specialists.</p> <p>2.3. Checking that irrigation and drainage systems are supervised to ensure there are no leaks or blockages; that the water is being evenly distributed; that drainage is effective and the system is in good working order.</p>
3. Evaluate irrigation system performance	<p>3.1. Plant growth /yield increases from irrigation are determined and valued.</p> <p>3.2. Costs of irrigation are calculated.</p> <p>3.3. Cost benefit of irrigation is determined and compared with alternative systems/approaches.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- analyse performance and audit data
- evaluate irrigation system performance
- strategically manage irrigated production systems
- develop and implement relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- plant requirements
- water quality

REQUIRED SKILLS AND KNOWLEDGE

- environmental impacts of irrigation, using water from any ground or underground source
- cost/benefit analysis
- enterprise policies and procedures.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- determine the feasibility of using or up-grading an irrigation system
- install or modify an irrigation and drainage system as necessary
- evaluate irrigation system outputs and performance
- strategically manage irrigated production systems.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement**RANGE STATEMENT**

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Irrigation system types may include:	<ul style="list-style-type: none"> • flood • furrow • micro-sprinklers • pop-ups • impact sprinklers • low-level lines • overhead sprinklers • drippers and micro-jets.
Irrigated systems may include:	<ul style="list-style-type: none"> • water harvesting • delivery • drainage collection • drainage storage and treatment as well as natural drainage and treatment systems involving the removal of pollutants through evaporation, and/or clearance by filtration through surface layers.

Unit Sector(s)

Unit sector	Water
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCWRK201A Observe and report on weather

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of observing and reporting on weather and climate conditions for an agricultural, horticultural or land management enterprise and defines the standard required to: monitor and interpret weather information; communicate warnings and concerns; identify weather and climate conditions and its impact upon farming and grazing activities; follow directions to minimise loss and damage to staff, livestock, crops, property; produce and review farm enterprises and operations for weather risk.
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Application of the Unit

Application of the unit	This unit applies to all workers in agricultural, horticultural and land management industries. It is normally carried out while working with limited supervision, within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Check weather and climate information	<p>1.1. Weather and climate information is checked to determine likely conditions.</p> <p>1.2. Changed weather and climate situations are recognised.</p> <p>1.3. Likely impact of changes in weather and climate are anticipated in respect to work tasks, safety of others, property, natural resources and local environment.</p> <p>1.4. Report is made to supervisor of anticipated impact of weather and climate.</p>
2. Carry out preventative action	<p>2.1. Information and advice is promptly disseminated to relevant personnel.</p> <p>2.2. Preventative action is determined according to the known effects on livestock, crops and work tasks.</p> <p>2.3. Actions to minimise loss and damage are implemented.</p> <p>2.4. Livestock, horticultural or crop management program or schedule of work tasks are adjusted and revised according to weather and climatic changes.</p>
3. Monitor weather and climate	<p>3.1. Regular updates are accessed to determine ongoing suitability of current programs.</p> <p>3.2. Viability of livestock, horticultural or crop management practices are reviewed to ensure suitability within meteorological conditions.</p> <p>3.3. Research on forecasting techniques is undertaken to</p>

ELEMENT	PERFORMANCE CRITERIA
	maintain currency of information. 3.4.Relevant information is documented and recorded according to enterprise requirements.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- monitor physical signs of weather in the context of available information
- relate forecasts to impact on current operations and activities
- communicate information on weather and situations that may be impacted
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- effects of wind and rain on wind chill
- effects of wind shear and wind chill exposure
- enterprise and industry policies for monitoring weather and climate conditions, and recording and reporting weather and climate conditions.
- weather and climate conditions impact upon farming and grazing activities
- working knowledge of climate and weather
- effects of wind chill on metabolism of animals
- effects of prolonged dry periods on pastures and animal production, and natural resources
- effects of extreme heat on animals, including during birthing, and effects of heat stress on neonates
- relevant legislative health and OHS requirements, especially as they relate to weather and climate monitoring and preparations for hazardous weather.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • monitor and interpret weather information • communicate warnings and concerns • identify weather and climate conditions and its impact upon farming and grazing activities • follow directions to minimise loss and damage to staff, livestock, crops, property and produce • review farm enterprises and operations for weather risk.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Weather information may include:	<ul style="list-style-type: none"> • reports • warnings • data collected from property weather stations • internet research • grazier alerts.

Unit Sector(s)

Unit sector	Work
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCWRK203A Operate in isolated and remote situations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the ability to plan, prepare for and work safely in isolated and remote situations and defines the standard required to: develop and maintain operating and emergency plans for working remotely; source and interpret maps of the area; implement workplace procedures for notifying management of location, activities and travel in remote areas; prepare provisions to cover essential and emergency needs; prepare for emergencies and carry communication equipment to send a request for help; use bushcraft skills to modify the living environment and reduce risk of mishap in remote areas.
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Application of the Unit

Application of the unit	This unit applies to all workers in agricultural, horticultural and land management industries that have to work in remote areas. Work is carried out under routine supervision and may involve operating in a team environment.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for operating in remote environments	<p>1.1.Information relating to the operating environment and location is collated and recorded to meet established enterprise policy.</p> <p>1.2.Detailed operating and travel plans, including a disaster plan and fallback position requirements are established in consultation with supervising staff.</p> <p>1.3.Appropriate authorities are notified of the action plans and time schedules according to enterprise policy.</p> <p>1.4.Relevant maps are identified and sourced.</p>
2. Prepare for operating in remote environments	<p>2.1.Personal needs are prepared for activities or travel in remote areas.</p> <p>2.2.Transportation and equipment are prepared for use in prescribed work location or along prescribed routes.</p> <p>2.3.Relevant maps are obtained and studied prior to departure.</p> <p>2.4.Planned activities and itinerary are accurately reported and recorded prior to departure in accordance with enterprise requirements.</p>
3. Prepare for	3.1.Provisioning meets expected operational and

ELEMENT	PERFORMANCE CRITERIA
emergency situations	<p>possible emergency needs.</p> <p>3.2. Initial planning and regular monitoring ensures structured usage of available provisions and resources.</p> <p>3.3. Operating plan is structured to include training in remote area survival techniques prior to operating in remote situations.</p> <p>3.4. Emergency management procedures are included as an integral part of operating plans and enterprise policy.</p>
4. Operate in remote environment	<p>4.1. Activities are completed according to instructions and established time schedules.</p> <p>4.2. All activities carried out in remote situations are executed in accordance with prescribed procedures.</p> <p>4.3. Emergency situations are handled in accordance with prescribed procedures and enterprise policy.</p> <p>4.4. Established reporting procedures are followed on completion of planned activities and on return to base in line with enterprise policy.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- plan for operating in remote environments
- prepare for operating in remote environments
- prepare for emergency situations
- operate in remote environments
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- map reading and navigation skills including direction finding (e.g., GPS, use of compass, stars or watch)
- local topography, nearby inhabitants and locations within that area
- survival techniques and human needs relating to survival situations
- clothing requirements for sun or heat protection
- basic first aid
- bush craft including making a fire, cooking and wild food gathering
- water supplies, sources and generation methods
- emergency vehicle and mechanical equipment repair
- the operation of communication equipment (e.g., field communications by two-way, satellite telephony and HF radio), and distress signalling including use of signalling mirrors
- weather and weather indicators
- basic rope skills including useful knots (reef, clove hitch, truckie's hitch, bowline); simple lashings and tying down loads.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- develop and maintain operating and emergency plans for working remotely
- source and interpret maps of the area
- implement workplace procedures for notifying of location, activities and travel in remote areas
- prepare provisions to cover essential and emergency needs

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • prepare for emergencies and carry communication equipment to send a request for help • use bushcraft skills to modify the living environment and reduce risk of mishap in remote areas.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Workplaces may include:	<ul style="list-style-type: none"> • any workplace where the ability to get help because of distance is such that personal safety may be at risk.

Unit Sector(s)

Unit sector	Work
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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AHCWRK302A Monitor weather conditions

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of monitoring and interpreting weather and climate conditions and assessing its likely impact on staff, crops, livestock, produce, property, natural resources, equipment and work tasks and defines the standard required to: monitor and interpret weather and climate information; communicate warnings and concerns; identify resource requirements and dangers; minimise loss and damage to staff, livestock, crops, natural resources, property, and produce; implement alternative livestock or other programs; continue to monitor weather changes.
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Application of the Unit

Application of the unit	This unit applies to workers in agricultural, horticultural and land management industries. The work is likely to be carried out with limited or minimal supervision within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Interpret weather and climate information	<p>1.1. Weather and climate information and warnings are regularly monitored to determine likely conditions.</p> <p>1.2. Potential variations in weather and climate conditions are anticipated and assessed according to warnings, weather patterns and historical experience.</p> <p>1.3. Possible impacts of weather and climate on crops, livestock and work tasks are identified to determine appropriate preventative action.</p> <p>1.4. Suitable preventative actions are reviewed to ensure availability of appropriate resources and responses.</p>
2. Carry out preventative action	<p>2.1. Information and advice is promptly disseminated to relevant personnel.</p> <p>2.2. Preventative action is determined according to the known effects on livestock, crops and work tasks.</p> <p>2.3. Actions to minimise loss and damage are implemented.</p> <p>2.4. Livestock or crop management program and work schedules are adjusted and revised according to climatic changes.</p>
3. Monitor weather and climate	<p>3.1. Regular updates are accessed to determine the ongoing suitability of current programs.</p> <p>3.2. Viability of livestock and crop management practices and scheduling of work tasks are reviewed to ensure suitability within meteorological conditions.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Research on forecasting techniques is undertaken to maintain currency of information.</p> <p>3.4. Relevant information is documented and recorded according to enterprise requirements.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- relate forecasts to impact on current operations and activities
- relate weather and climate conditions and changes to decision-making and prevention of loss and damage
- monitor physical signs in the context of available information
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- working knowledge of climate and weather
- weather and climate conditions and its impact upon farming and grazing activities
- effects of wind and rain on wind chill
- relevant legislative health and Occupational Health and Safety (OHS) requirements especially as they relate to weather and climate monitoring and preparations for hazardous weather
- enterprise and industry policies for monitoring weather and climate conditions and recording and reporting weather and climate conditions
- if applicable, effects of shearing and/or parturition and wind chill exposure
- if applicable, effects of wind chill on metabolism of animals
- if applicable, effects of prolonged dry periods on pastures and animal production and natural resources.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • monitor and interpret weather and climate information • communicate warnings and concerns • identify resource requirements and dangers • minimise loss and damage to staff, livestock, crops, natural resources, property, and produce • implement alternative livestock or other programs and continue to monitor weather changes.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Interpreting weather and climate conditions may include:	<ul style="list-style-type: none"> • all situations, techniques and sources of evidence for monitoring and assessing its likely impact.

Unit Sector(s)

Unit sector	Work
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCWRK304A Respond to rescue incidents

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers responding to emergency and rescue incidents and defines required to: investigate the circumstances and logistics for the emergency; carry out preparation and move to the rescue site; assess the situation and establish communication with additional or specialist help; carry out the required rescue or response to emergency; implement post incident responses.
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Application of the Unit

Application of the unit	This unit relates to responding to rescue incidents within the person's own area of responsibility.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for response	<p>1.1. Equipment checked to ensure availability and serviceability.</p> <p>1.2. Task and operational instructions are obtained in accordance with enterprise procedures.</p> <p>1.3. Location details of incident is obtained in accordance with enterprise procedures.</p>
2. Respond to incident	<p>2.1. Travel to incident location is undertaken in a safe and efficient manner.</p> <p>2.2. Communication with base station and other personnel is maintained at all times in accordance with enterprise procedures.</p> <p>2.3. On site search activities are carried out as necessary in accordance with enterprise procedures and Occupational Health and Safety (OHS) requirements.</p>
3. Rescue is effected	<p>3.1. Incident scene is assessed and monitored for hazards and appropriateness of planned procedures.</p> <p>3.2. Planned procedures are modified where necessary in response to local circumstances in accordance with enterprise procedures, safety and OHS requirements.</p> <p>3.3. Support to other rescue services is provided as appropriate in accordance with enterprise procedures.</p> <p>3.4. Access to casualties is gained safely in accordance with enterprise procedures and OHS requirements.</p> <p>3.5. Protective equipment and clothing is used as appropriate in accordance with enterprise procedures, manufacturer's guidelines and OHS requirements.</p> <p>3.6. Equipment is operated safely and appropriately in</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with enterprise procedures, manufacturer's guidelines and OHS requirements.</p> <p>3.7. Progress of rescue is communicated in accordance with enterprise procedures.</p> <p>3.8. Casualties are treated, monitored and moved to safety in accordance with first aid and OHS procedures.</p>
4. Implement post incident responses	<p>4.1. Equipment recovered, cleaned and serviced in accordance with enterprise procedures, manufacturer's guidelines and OHS requirements.</p> <p>4.2. Documentation is completed in accordance with enterprise requirements.</p> <p>4.3. Incidents are reported in accordance with enterprise procedures.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- prepare for response
- respond to incident
- effect the rescue
- implement post-incident responses
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- local environmental conditions
- search and rescue methods

REQUIRED SKILLS AND KNOWLEDGE

- operation and characteristics of rescue equipment, tools and vehicles
- environmental, public health and safety issues
- types of hazards and how they should be handled
- enterprise procedures, legislative and OHS requirements
- first aid, life preservation.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- investigate the circumstances and logistics for the emergency
- carry out preparation and move to the rescue site
- assess the situation and establish communication with additional or specialist help
- carry out the required rescue or response to emergency
- implement post incident responses.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Rescue incidents may include:

- fires
- drowning
- accidents
- vehicle
- boating
- accidents
- exposure to hazardous materials
- injury
- damage to equipment
- environment
- significant sites
- stranding
- exposure
- lost persons
- vehicle, boating and aircraft accidents.

Unit Sector(s)

Unit sector	Work
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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AHCWRK505A Manage trial and/or research material

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of managing a trial and/or research materials as part of a designated research project and defines the standard required to: define the purpose of the trial and the scope and extent of the work; oversee management of trial/research materials; collate data from trials or research; draw conclusions and apply findings of trials and/or research.
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Application of the Unit

Application of the unit	This unit is likely to be undertaken alone or under broad guidance. It requires a high level of technical understanding about the aims and methodologies of research.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify scope and extent of work	<p>1.1.Trial/research hypothesis and parameters are identified according to researchers' requirements.</p> <p>1.2.Trial/research is planned to meet research objectives.</p> <p>1.3.Data relevant to managing trial/research materials is assessed according to research parameters.</p> <p>1.4.Data relevant to managing trial/research materials is assessed according to enterprise policy.</p> <p>1.5.Occupational Health and Safety (OHS) hazards associated with managing trial/research materials are identified, risks assessed, and controls developed according to enterprise guidelines, costed and documented in the survey design.</p> <p>1.6.Tools, equipment and machinery required for managing trial/research materials are identified, costed, and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>1.7.Research design is determined according to the trial/research plan.</p>
2. Oversee management of trial/research materials	<p>2.1.Trial/research is prepared, maintained and monitored according to project parameters.</p> <p>2.2.Field work is conducted to verify and collect data according to the trial/research design and research parameters.</p> <p>2.3.Work activities are monitored for accuracy, validity and compliance to the parameters of the trial/research design.</p> <p>2.4.Staged data collection is undertaken according to trial/research design, scheduling and access</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>requirements.</p> <p>2.5. Monitoring and data is recorded faithfully, promptly and accurately according to the specifications of the trial/research design.</p>
3. Prepare reports on work complete	<p>3.1. Collected data is recorded according to trial/research requirements and guidelines.</p> <p>3.2. Data is statistically analysed to determine significance of research results.</p> <p>3.3. Hypothesis is accepted or rejected based on data collected.</p> <p>3.4. Reports are produced which conform to the structure and content required by the researcher.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- define the purpose of the trial
- identify scope and extent of work
- collate data
- oversee management of trial/research materials
- comply with legislative and enterprise requirements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- scheduling and programming work within timelines
- ecological principles and terminology

REQUIRED SKILLS AND KNOWLEDGE

- data collection and reporting
- research procedures and best practice techniques
- enterprise work team management guidelines
- data analysis techniques
- research planning and design
- research methodologies.

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- define the purpose of the trial and the scope and extent of the work
- oversee management of trial/research materials
- collate data from trials or research
- draw conclusions and apply findings of trials and/or research.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement**RANGE STATEMENT**

RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Trials may include:

- research projects
- field trials.

Unit Sector(s)

Unit sector	Work
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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BSBADM311A Maintain business resources

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to determine, administer and maintain resources and equipment to complete a variety of tasks.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts. They may exercise discretion and judgement using appropriate theoretical knowledge of business resources and their maintenance to provide technical advice and support to a team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Advise on resource requirements	1.1. Calculate estimates of future and present <i>business resource needs</i> in accordance with <i>organisational requirements</i> 1.2. Ensure advice is clear, concise and relevant to achievement of organisational requirements 1.3. Provide information on the most economical and effective choice of equipment, materials and suppliers 1.4. Identify resource shortages and possible impact on operations
2. Monitor resource usage and maintenance	2.1. Ensure resource handling is in accordance with established organisational requirements including <i>occupational health and safety requirements</i> 2.2. Use <i>business technology</i> to monitor and identify the effective use of resources 2.3. Use consultation with individuals and teams to facilitate effective decision making on the appropriate allocation of resources 2.4. Identify and adhere to relevant <i>policies regarding resource use</i> in the performance of operational tasks 2.5. Routinely monitor and compare resource usage with estimated requirements in budget plans
3. Acquire resources	3.1. Ensure acquisition and storage of resources is in

ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with organisational requirements, is cost effective and consistent with organisational timelines</p> <p>3.2.Acquire resources within available time lines to meet identified requirements</p> <p>3.3.Review <i>resource acquisition processes</i> to identify improvements in future resource acquisitions</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to read and understand organisation's policies and procedures; to write simple instructions for a particular routine task
- evaluation skills to diagnose faults and to monitor resource usage
- problem-solving skills to determine appropriate fault repair actions
- numeracy skills to calculate resource expenditure
- technology skills to select and use technology appropriate to a task.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- organisational resource acquisition policies, plans and procedures
- functions of a range of business equipment
- organisational procedures for record keeping/filing systems, security and safe recording practices.

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • collecting and recording data on resource use • observing resource use over defined and operational timeframes • carrying out routine maintenance • knowledge of organisational resource acquisition policies, plans and procedures.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of documentation estimating future and present business resource needs • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of equipment maintenance procedures • review of information provided on the most economical and effective choice of equipment, materials and suppliers • evaluation of documentation reviewing resource acquisition processes.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other general administration units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Business resources</i> may include:	<ul style="list-style-type: none"> • equipment • facilities • human resources • raw materials • software • stock and supplies
<i>Organisational requirements</i> may include:	<ul style="list-style-type: none"> • access and equity principles and practice • business and performance plans • defined resource parameters • ethical standards • goals, objectives, plans, systems and processes • legal and organisational policies, guidelines and requirements • management and accountability channels • manufacturer's and operational specifications • OHS policies, procedures and programs • quality and continuous improvement processes and standards • quality assurance and/or procedures manuals • security and confidentiality requirements
<i>Occupational health and safety requirements</i> may include:	<ul style="list-style-type: none"> • decision making delegations • equipment use • first aid kit • medical attention • reporting requirements • site access
<i>Business technology</i> may include:	<ul style="list-style-type: none"> • computer applications • computers • modems • personal schedules • photocopiers
<i>Policies regarding resource use</i>	<ul style="list-style-type: none"> • budgeting limits

RANGE STATEMENT	
may include:	<ul style="list-style-type: none"> • ordering procedures • purchasing authorities • recruitment and personnel • time management • transport/travel policies
<i>Resource acquisition processes</i> may include:	<ul style="list-style-type: none"> • contracted supplier ordering • internal approvals • non-tendered processes • periodic forecasts • tendered processes

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Administration - General Administration
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Co-requisite units

Co-requisite units	

BSBAUD501B Initiate a quality audit

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to initiate and organise a quality audit with an auditee. It covers assessing the scope and objectives of a quality audit; communicating with the auditee regarding the proposed quality audit; identifying resources required to conduct the audit; and developing and submitting a quality audit plan.</p> <p>The types of audit may include an external or internal systems audit or process or product/service audit.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals with well established, sound theoretical knowledge base in quality auditing who are proficient in using a wide range of specialised quality auditing and managerial techniques to plan, carry out and evaluate a quality audit, their own work and that of others working under their direct supervision in a quality audit team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess quality audit scope and objectives	1.1. Determine and discuss <i>audit objectives</i> with the auditee, client and all other relevant parties 1.2. Determine and discuss <i>scope</i> of the quality audit with the auditee, client and all other relevant parties 1.3. Identify <i>relevant standards</i> that impact on the environment in which the audit operates 1.4. Determine scope commensurate with identified risks
2. Communicate with auditee regarding proposed quality audit	2.1. Determine audit history, organisational structure and culture through consultation with the auditee 2.2. Negotiate and ensure agreement with auditee, the proposed <i>audit methods and techniques</i> to be applied 2.3. Outline audit processes to establish sequence of

ELEMENT	PERFORMANCE CRITERIA
	audit activities, and the roles of the auditors and auditees in the process
3. Identify resources required to conduct quality audit	3.1. Identify <i>resources</i> required to perform the quality audit efficiently and effectively 3.2. Select audit team members on the basis of relevant expertise 3.3. Confirm availability of resources required to conduct the audit with auditee 3.4. Assign roles and responsibilities to audit team members
4. Develop and submit quality audit plan	4.1. Develop <i>quality audit plan</i> according to established scope and objectives 4.2. Assign timing, schedules and responsibilities for implementation of the audit plan 4.3. Develop audit priorities and ensure agreement with auditees and audit team members 4.4. Document and submit audit plan to auditee
5. Prepare audit team	5.1. Inform audit team members of their responsibilities, audit objectives and scope 5.2. Communicate audit plan and schedules to all audit team members 5.3. Discuss and clarify audit methods and techniques with audit team members
6. Review auditee documentation	6.1. Review auditee's previous audits to establish possible impact on the conduct of the current audit 6.2. Review and check relevant organisational documents for accuracy 6.3. Resolve arising problems with auditee and relevant parties
7. Identify and prepare checklists and audit related documentation	7.1. Develop checklists to reflect audit scope and objectives 7.2. Develop or obtain documentation required for the audit 7.3. Prepare agenda for entry meeting 7.4. Include value-adding activities in audit related documentation where required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to listen to and question clients and other audit team members
- culturally appropriate communication skills to relate to people from diverse backgrounds and abilities
- interpersonal skills to establish rapport with clients and to liaise with other audit team members
- literacy skills to read, write, edit and proofread documents to ensure clarity of meaning, accuracy and consistency of information
- organisational, planning and time management skills to sequence tasks, meet time lines, conduct inspections and arrange meetings
- problem-solving skills to overcome any issues which may potentially affect the auditing process or outcome
- teamwork skills
- technology skills to use equipment required to conduct quality auditing activities.

Required knowledge

- auditing codes of practice or ethics
- auditing methods and techniques
- auditing regulations and standards, including:
 - AS/NZS ISO: 9000:2006: Quality management systems - Fundamentals and vocabulary
 - AS/NZS ISO 19011:2003: Guidelines for quality and/or environmental management systems auditing
- current audit practices
- industry, product and/or service knowledge
- quality auditing principles, techniques and systems
- requirements of house or other style manual protocols for written communications
- relevant legislation affecting business operations including appropriate occupational health and safety, environmental, and privacy legislation
- software applications relevant to conducting quality auditing activities
- terminology relating to quality auditing.

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> documented audit plans for auditees across a variety of contexts including the scope and objectives of the audit, proposed audit methods and techniques to be used, required resources and schedules, and allocation of individual audit team member responsibilities for conducting the proposed audit knowledge of relevant legislation, national standards and compliance issues.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to workplace documentation including previous quality audit reports, checklists, risk management plans and audit plans.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence by third party workplace reports of on-the-job performance by the candidate review quality auditing documentation demonstration of quality auditing techniques in a workplace observations of interactions with team members and colleagues observations of presentations of audit plans oral or written questioning to assess knowledge of auditing codes of practice or ethics assessment of audit plan.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other quality auditing units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Audit objectives</i> may include:</p>	<ul style="list-style-type: none"> • compliance with contractual and/or legislative requirements • evaluation of follow-up corrective action since previous audit • evaluation of level of compliance of auditee's activities, systems, processes, products or services with quality system's objectives • identifying areas of potential improvement • measuring performance in achieving quality objectives and confirming the effectiveness of the implemented quality system in meeting specified objectives
<p><i>Scope</i> may include:</p>	<ul style="list-style-type: none"> • depth and focus of audit • industry specific issues, for example seasonal factors • legal and regulatory issues • organisational customs and protocols • products, services, processes and/or activities to be audited • sites • standards to be applied
<p><i>Relevant standards</i> may include:</p>	<ul style="list-style-type: none"> • industry standards • professional standards • regulations • relevant legislation
<p><i>Audit methods and techniques</i> may include:</p>	<ul style="list-style-type: none"> • analysis • determining information flows • evaluating the effectiveness of system controls • questioning • sampling • scanning • tracing • trend analysis

RANGE STATEMENT	
Resources may include:	<ul style="list-style-type: none"> • auditee-provided resources • experience and technical expertise of auditors • facilities • financial requirements • number of auditors required • reference materials • time • travel and accommodation
Quality audit plan may include:	<ul style="list-style-type: none"> • audit requirements and/or identification of relevant quality system documentation • auditee provision of personnel for audit • confidentiality requirements • contingency actions • distribution of reports • entry meeting • exit interview • follow-up procedures • measurement criteria • reporting procedures • resource requirements • roles and responsibilities of auditors • safety of auditors • sampling techniques • scope and objectives of audit • time lines and schedules

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Regulation, Licensing and Risk - Quality Auditing
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Co-requisite units

Co-requisite units		

BSBCMM301B Process customer complaints

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i>.</p> <p>Revised unit. Required skills updated to focus on learning and development practices and compliance with policy and procedures.</p> <p>Replaces BSBCMM301A Process customer complaints</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to handle formal and informal negative feedback and complaints from customers. Operators may exercise discretion and judgement using appropriate knowledge of products, customer service systems and organisational policies to provide technical advice and support to a team.

Application of the Unit

This unit applies to individuals who are skilled operators and apply a broad range of competencies in various customer service contexts.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Respond to complaints	<p>1.1 Process <i>customer complaints</i> using <i>effective communication</i> according to organisational procedures established under organisational policies, legislation or codes of practice</p> <p>1.2 Obtain, <i>document and review reports relating to customer complaints</i></p> <p>1.3 Make decisions about customer complaints, taking into account applicable legislation, organisational policies and codes</p> <p>1.4 Negotiate resolution of the complaint and obtain agreement where possible</p> <p>1.5 Maintain a register of complaints/disputes</p> <p>1.6 Inform customer of the outcome of the investigation</p>
2. Refer complaints	<p>2.1 Identify complaints that require referral to other personnel or external bodies</p> <p>2.2 Make <i>referrals</i> to appropriate personnel for follow-up in accordance with individual level of responsibility</p> <p>2.3 Forward all documents and investigation reports</p> <p>2.4 Follow-up appropriate personnel to gain prompt decisions</p>
3. Exercise judgement to resolve customer service issues	<p>3.1 Identify implications of issues for customer and organisation</p> <p>3.2 Analyse, explain and negotiate appropriate options for resolution with customer</p> <p>3.3 Propose viable options in accordance with appropriate legislative requirements and enterprise policies</p> <p>3.4 Ensure matters for which a solution cannot be negotiated are referred to appropriate personnel</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to identify trends and positions of products and services
- communication skills to:
 - interpret customer complaints
 - monitor and advise on customer service strategies and resolutions
- communication skills to:
 - people with diverse abilities
 - relate to people from culturally diverse backgrounds
- literacy skills to:
 - edit and proofread texts to ensure clarity of meaning and accuracy of grammar and punctuation
 - prepare general information and papers according to target audience
 - read and understand a variety of texts
- problem-solving skills to:
 - apply organisational procedures to a range of situations
 - deal with customer enquiries or complaints
 - exercise judgement in this application
- self-management skills to:
 - comply with policies and procedures
 - consistently evaluate and monitor own performance
 - seek learning opportunities.

Required knowledge

- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- importance of good communication skills and the individual's role in processing customer complaints
- organisational procedures and standards for processing complaints and recommending appropriate action.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • applying judgement in the application of industry and/or organisational procedures • working with customer complaints • knowledge of organisational procedures and standards for processing complaints.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of customer complaints • examples of documents relating to customer complaints policies and procedures.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • analysis of responses to case studies and scenarios • demonstration of techniques • observation of presentations • oral or written questioning to assess knowledge of individual's role in processing customer complaints • review of documentation outlining necessary reports relating to customer complaints • review of complaints/disputes register.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Customers may include:	<ul style="list-style-type: none"> • customers with routine or specific requests • internal or external customers • people from a range of social, cultural or ethnic backgrounds • people who may be unwell, drug affected or emotionally distressed • people with varying physical and mental abilities • regular and new customers.
Complaints may include:	<ul style="list-style-type: none"> • different types of severity, formality and sources • scenarios where external bodies such as police are required • straightforward customer dissatisfaction • level of documentation required.
Effective communication may include:	<ul style="list-style-type: none"> • giving customers full attention • maintaining eye contact (for face-to-face interactions), except where eye contact may be culturally inappropriate • speaking clearly and concisely • using appropriate language and tone of voice • using clear written information/communication • using appropriate non-verbal communication (body language) personal presentation (for face-to-face interactions).
Document and review reports relating to customer complaints may include:	<ul style="list-style-type: none"> • completing forms and written reports • using audio-visual tapes • using computer-based systems.
Referrals may include:	<ul style="list-style-type: none"> • external bodies: <ul style="list-style-type: none"> • Ombudsman • Independent Commission Against Corruption (ICAC) • police • relevant superiors in the organisational hierarchy.

Unit Sector(s)

Communication – Interpersonal Communication

Custom Content Section

Not applicable.

BSBCMM401A Make a presentation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit covers the performance outcomes, skills and knowledge required to prepare, deliver and review a presentation to a target audience.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who may be expected to make presentations for a range of purposes, such as marketing, training, promotions, etc. They contribute well developed communication skills in presenting a range of concepts and ideas.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare a presentation	<p>1.1. Plan and document presentation approach and intended outcomes</p> <p>1.2. Choose <i>presentation strategies, format and delivery methods</i> that match the <i>characteristics</i> of the target audience, location, resources and personnel needed</p> <p>1.3. Select <i>presentation aids, materials and techniques</i> that suit the format and purpose of the presentation, and will enhance audience understanding of key concepts and central ideas</p> <p>1.4. Brief others involved in the presentation on their roles/responsibilities within the presentation</p> <p>1.5. Select <i>techniques to evaluate presentation effectiveness</i></p>
2. Deliver a presentation	<p>2.1. Explain and discuss desired outcomes of the presentation with the target audience</p> <p>2.2. Use presentation aids, materials and examples to support target audience understanding of key concepts and central ideas</p> <p>2.3. Monitor non-verbal and verbal communication of participants to promote attainment of presentation outcomes</p> <p>2.4. Use persuasive communication techniques to secure audience interest</p> <p>2.5. Provide opportunities for participants to seek</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>clarification on central ideas and concepts, and adjust the presentation to meet participant needs and preferences</p> <p>2.6. Summarise key concepts and ideas at strategic points to facilitate participant understanding</p>
3. Review the presentation	<p>3.1. Implement <i>techniques to review the effectiveness</i> of the presentation</p> <p>3.2. Seek and discuss reactions to the presentation from participants or from key personnel involved in the presentation</p> <p>3.3. Utilise feedback from the audience or from key personnel involved in the presentation to make changes to central ideas presented</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- facilitation and presentation skills to communicate central ideas of a message in an informative and engaging manner, and to utilise verbal and non-verbal techniques to sustain participant engagement
- literacy skills to prepare presentation information and to write in a range of styles for different target audiences.

Required knowledge

- data collection methods that will support review of presentations
- industry, product/service
- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - environmental issues
 - occupational health and safety

REQUIRED SKILLS AND KNOWLEDGE

- principles of effective communication
- range of presentation aids and materials available to support presentations.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- preparation, delivery and evaluation of the effectiveness of at least two presentations related to the candidate's occupation or area of interest
- knowledge of the principles of effective communication.

Context of and specific resources for assessment

Assessment must ensure:

- access to an actual workplace or simulated environment
- access to office equipment, documentation and resources.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- demonstration of preparation, delivery and evaluation of a presentation
- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- observation of presentations
- review of selected presentation aids, materials and techniques
- review of briefing provided for others involved in the presentation
- evaluation of techniques implemented to review the effectiveness of the presentation.

Guidance information for

Holistic assessment with other units relevant to the

EVIDENCE GUIDE	
assessment	industry sector, workplace and job role is recommended, for example: <ul style="list-style-type: none"> • other general administration units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Presentation strategies</i> may involve:</p>	<ul style="list-style-type: none"> • case studies • demonstration • discussion • group and/or pair work • oral presentations • questioning • simulations and role-play
<p><i>Presentation format and delivery methods</i> may include:</p>	<ul style="list-style-type: none"> • advertising copy • audio • direct marketing copy • individual presentation • public relations copy • scripts • storyboards • team presentation • verbal presentation • video • visuals
<p><i>Characteristics</i> may include:</p>	<ul style="list-style-type: none"> • age • cultural and language background • educational background or general knowledge • gender • language, literacy and numeracy needs • physical ability • previous experience with the topic

RANGE STATEMENT	
<i>Presentation aids and materials</i> may include:	<ul style="list-style-type: none"> • computer simulations and presentations • diagrams, charts and posters • models • overhead projector • paper-based materials • video and audio recordings • whiteboard
<i>Presentation techniques</i> may include:	<ul style="list-style-type: none"> • animation • comparative advertising • live action • music • signature elements such as: <ul style="list-style-type: none"> • slogans • logotypes • packaging • sound effects • use of a guest speaker • use of black and white • use of colour • use of humour
<i>Techniques to evaluate presentation effectiveness</i> may include:	<ul style="list-style-type: none"> • action research • critical friends • focus group interviews • one-on-one interviews with participants and other personnel involved in the presentation • written feedback provided by participants

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Communication - Interpersonal Communication
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Co-requisite units

Co-requisite units		

BSBCMM402A Implement effective communication strategies

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to select and use communication strategies appropriate to a defined job role.</p> <p>A range of legislation, rules, regulations and codes of practice may apply to this unit at the time of endorsement, depending on job roles and jurisdictions.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who use a range of communication strategies in carrying out their work.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Receive enquiry	1.1. Establish nature of <i>enquiry</i> 1.2. Ensure interactions with <i>person making enquiry</i> are in accordance with <i>organisation's standards and procedures</i> and meet the person's <i>needs and expectations</i> 1.3. Clearly outline <i>legal and other limits</i> of own responsibility to person making the enquiry 1.4. Record person's details and issues
2. Identify and apply appropriate communication techniques	2.1. Use <i>communication strategies</i> that reflect organisational standards and procedures 2.2. Use effective <i>communication techniques</i> during the enquiry 2.3. Ensure confidentiality of the enquiry is respected
3. Determine action to be taken	3.1. Identify personal limitations in taking action and seek appropriate assistance from <i>designated individuals</i> 3.2. Respond in an <i>appropriate manner</i> 3.3. Involve <i>other parties</i> in action if appropriate 3.4. Manage expectations of person making enquiry
4. Review outcomes of communication	4.1. Follow up with person making enquiry to ensure action was effected 4.2. Seek feedback about the communication strategies

ELEMENT	PERFORMANCE CRITERIA
	4.3.Undertake appropriate record keeping and reporting

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - listen to and interpret enquiries
 - provide clear and specific information
- computer skills to:
 - access information from a range of online sources
 - keep records
 - provide reports in required format
- literacy skills to document and record details of enquiries
- research skills to:
 - locate necessary information from internal and external sources
 - identify and evaluate status of information sought
- interpersonal skills to:
 - handle and tactfully screen enquiries of a sensitive nature
 - interact with a range of culturally and linguistically diverse clients
- problem-solving skills to assess enquiries and to allocate them to appropriate sources for further information

Required knowledge

- legislation, regulations and standards relevant to job role
- organisation's policies and procedures required for the full range of tasks associated with role and responsibilities
- accepted codes of practice relevant to the workplace, including those relating to:
 - privacy and confidentiality
 - use of company property
 - duty of care
 - ethical behaviour
 - non-discriminatory practice
 - conflict of interest
 - compliance with reasonable direction

REQUIRED SKILLS AND KNOWLEDGE

- extent of legal professional privilege

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the ability to:

- conduct work according to accepted codes of conduct
- convey appropriate options to person making enquiry according to organisation's policies and procedures
- exercise judgement and tact in decisions as to when enquiries should be transferred to a more experienced person
- select appropriate communication techniques with regard to culturally and linguistically diverse clients.

Context of and specific resources for assessment

Assessment must ensure access to:

- an actual workplace or simulated environment
- workplace manuals and reference materials, such as company policies, procedural manuals, checklists and sample forms
- appropriate technology, such as computers with relevant software and communication mediums
- appropriate resources and people with expert knowledge of communication techniques appropriate to the specific workplace.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- analysis of responses to case studies and scenarios
- demonstration of communication techniques
- direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate
- observation of performance in role plays
- review of documentation recording details of person making enquiry, and issues
- evaluation of needs and expectations of person making enquiry

EVIDENCE GUIDE	
	<p>and discussion of appropriate responses</p> <ul style="list-style-type: none"> oral or written questioning to assess knowledge of scope of own responsibilities and obligations to refer matters outside of area of responsibility.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> BSBRES404A Research legal information using primary sources.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Enquiry</i> may be specific or general and may include:</p>	<ul style="list-style-type: none"> complaint liaison seeking a meeting seeking information seeking referral.
<p><i>Person making enquiry</i> may include:</p>	<ul style="list-style-type: none"> client or customer general public government representative internal employee representative of another organisation supplier.
<p><i>Organisation's standards and procedures</i> may include:</p>	<ul style="list-style-type: none"> code of conduct with respect to security, confidentiality and privacy compliance framework documenting activities planned and undertaken procedures relating to: <ul style="list-style-type: none"> booking rooms and resources time recording protocols relating to: <ul style="list-style-type: none"> accommodating specific client needs, e.g. case

RANGE STATEMENT	
	<p>manager, social worker or parole officer</p> <ul style="list-style-type: none"> • telephone responses.
<i>Needs and expectations</i> may include:	<ul style="list-style-type: none"> • fair and equitable treatment • follow-up action • sensitivity to physical, cultural, ethnic, language and literacy requirements • specificity and accuracy of information.
<i>Legal and other limits</i> may include:	<ul style="list-style-type: none"> • extent of legal and professional privilege • industry and professional regulations • legislative and professional codes of conduct • organisational practices.
<i>Communication strategies</i> may include:	<ul style="list-style-type: none"> • discuss options • draft an email, formal letter or other written response • make a telephone call • organise a meeting • send a fax • use text messaging or other mobile telephone communication • use web-based communication and networking strategies.
<i>Communication techniques</i> may include:	<ul style="list-style-type: none"> • accommodating communication difficulties experienced by person making enquiry, such as language or literacy • actively listening • clarifying request or problem by summarising and repeating to ensure that information gathered is accurate • controlling tone of voice and body language • demonstrating sensitivity to emotional and physical state and cultural background of person making enquiry • using correct grammar and language.
<i>Designated individuals</i> may include:	<ul style="list-style-type: none"> • colleague • regulatory or government personnel • supervisor • teacher or trainer.
<i>Appropriate manner</i> may include:	<ul style="list-style-type: none"> • contacting another organisation • documenting and filing communication according to organisation's procedures • not pursuing the matter • notifying relevant department of enquiry • organising a meeting • promptly contacting person making enquiry where

RANGE STATEMENT	
	<p>appropriate</p> <ul style="list-style-type: none"> • providing a written response • recording contact on database • referring person making enquiry to: <ul style="list-style-type: none"> • appropriate government department • community legal centre • law firm • supervisor or appropriate authority within the firm • relaying information verbally and, if directed by legal practitioner, forwarding information in writing to person making enquiry • telephoning person making enquiry after researching the appropriate information.
<i>Other parties</i> may include:	<ul style="list-style-type: none"> • barristers • clients • clients' representatives • government representatives • interpreters • lawyers for opposing party • legal aid • medical and legal consultants • police • regulatory bodies.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Communication - interpersonal communication
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Co-requisite units

Co-requisite units		

BSBCRT402A Collaborate in a creative process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to collaborate in a creative process.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who participate in a collaborative creative process in a work or broader life context. It is relevant to individuals who are involved in what is traditionally considered creative endeavour but is also very important in broader business and community activities where creative team effort is highly valued.</p> <p>The unit focuses on effective engagement in a collaborative process, underpinned by a commitment to trust and ethics as a key feature of collaborative creative effort.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Enter into a collaborative creative process	1.1. Adopt a <i>personal philosophy of trustworthy and ethical behaviour</i> 1.2. Maximise the possibilities of sustaining creative partnerships through trustworthy and ethical behaviour 1.3. Use <i>professional discretion and judgement</i> in dealing with others 1.4. Acknowledge and respect the <i>different ways that different people may contribute</i> to the creative process 1.5. Acknowledge and work within the legal framework that applies to creative content as part of individual commitment to an ethical approach 1.6. Respect collaborative efforts by relinquishing individual ownership of ideas
2. Engage in a collaborative creative	2.1. Maintain a <i>belief in personal ideas</i> , combined with a willingness to move on as ideas are discarded and

ELEMENT	PERFORMANCE CRITERIA
process	<p>others evolve</p> <p>2.2.Be prepared to let go of own vanity and ego to allow new ideas to emerge</p> <p>2.3.Use <i>language</i> and adopt a <i>demeanour</i> that demonstrates respect and trust for others</p> <p>2.4.Listen to, value, respect and trust the contributions of others as material to work with rather than positions to argue against</p> <p>2.5.Challenge, test and share ideas in a supportive way as part of the creative process</p> <p>2.6.Move on from initial positions and preconceptions to accept and embrace new and unpredictable ideas as they emerge during the creative process</p> <p>2.7.Play a role that encourages the <i>movement and shift of ideas</i> within the group towards a well-conceived solution</p>
3. Reflect on own role in the collaborative creative process	<p>3.1.Reflect on own level of participation, relationships with others and personal behaviour in the collaborative process</p> <p>3.2.Identify ways to do better next time and follow up on any issues that need to be resolved</p> <p>3.3.Identify and seek opportunities to refine and expand own skills and knowledge, including learning from failing</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to nurture trust, to model open and supportive communication, and to articulate potentially complex ideas
- creative thinking skills to generate and explore ideas
- learning and self-management skills to reflect on and enhance own ability to contribute effectively to a collaborative creative process
- problem-solving skills to continually be evaluating and challenging ideas and moving them forward towards solutions.

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

- concept of shared intellectual property from collaborative creativity
- concepts of trust and ethical behaviour in the context of creative endeavour
- different roles people may play in a collaborative creative process and how this contributes to the overall effort
- how the creative process works in different situations (e.g. as an individual, as part of a group)
- how the potential for creativity can be maximised within a team
- legal framework that affects copyright, moral rights and intellectual property issues
- what stops creativity in a group environment.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- positive and full participation in a collaborative creative process that generates, expands and develops ideas into a well-conceived solution
- communication and creative-thinking skills that make a positive contribution to the collaborative effort
- knowledge and understanding of the ethical framework in which any type of creative endeavour operates.

Context of and specific resources for assessment

Assessment must ensure:

- involvement of a team of people in the collaborative creative process.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • direct observation of the candidate participating in collaborative creative activity • interviews with others participating in the process to determine the nature and quality of the candidate's participation and interactions • evaluation of candidate presentation (verbal or written) on the collaborative process, including challenges, benefits and key learning for the future • oral or written questioning to assess knowledge of concepts of trust and ethical behaviour in the context of creative endeavour.
Guidance information for assessment	<p>A collaborative creative effort always occurs in a specific context. Therefore holistic assessment with other units relevant to the industry sector, workplace and job role is highly recommended. Assessors must, however, retain a strong focus on the key aspects of collaboration and creativity detailed in this unit. Combined assessment with the following unit would also be appropriate:</p> <ul style="list-style-type: none"> • BSBCRT301A Develop and extend critical and creative thinking skills.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Personal philosophy of trustworthy and ethical behaviour</i> may relate to:</p>	<ul style="list-style-type: none"> • acknowledging discomfort or anger • being prepared to fully participate • communicating in an open way • honesty • honouring commitments • sensitivity to social, cultural, personal situations and dynamics • showing respect • understanding of the consequences of actions

RANGE STATEMENT	
<i>Professional discretion and judgement</i> may relate to:	<ul style="list-style-type: none"> • assessing when to keep quiet • being aware of and responding to different personality types • knowing when it is appropriate or inappropriate to share information • knowing with whom information should be shared
<i>Different ways that different people may contribute</i> may relate to:	<ul style="list-style-type: none"> • different approaches to expressing opinions or ideas • inclinations to lead or follow • influence with others • interpersonal skills • networks • past experience • technical skills and expertise
<i>Belief in personal ideas</i> may be demonstrated by:	<ul style="list-style-type: none"> • backing ideas up with information and rationale • being prepared to argue for own ideas • confidence in own ability to create many ideas • confidence to share ideas • confident articulation of ideas • spending time developing and refining own ideas
<i>Language</i> that demonstrates respect for others may involve:	<ul style="list-style-type: none"> • acknowledging new ideas and effort • avoiding negative words • avoiding personal negatives like 'you cannot' or 'you should not' • choosing words wisely • listening • making differentiations between ideas and people • managing tone • speaking at a level appropriate to the listener
<i>Demeanour</i> that demonstrates respect for others may relate to:	<ul style="list-style-type: none"> • avoiding intellectual bullying • encouraging others to express ideas • facial expression • keeping a positive mindset • listening before speaking • physical position • refraining from blame or accusation

RANGE STATEMENT	
	<ul style="list-style-type: none"> • other non-verbal behaviour • understanding the balance between constructive comment and attention seeking
<i>Movement and shift of ideas</i> may involve:	<ul style="list-style-type: none"> • building in 'what if' scenarios • encouraging a stocktake before moving forward • making connections between seemingly disparate ideas • refining ideas that seem positive • returning to earlier ideas • returning to key objectives • suggesting new processes • turning ideas 'on their head' to resolve blockages

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Creative Process
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Co-requisite units

Co-requisite units		

BSBCUS301B Deliver and monitor a service to customers

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i></p> <p>Revised unit. Performance criteria amended so that the learner is not required to 'incorporate evidence of customer satisfaction in decision to modify products or services'. Required skills updated to focus on learning and development practices and compliance with policy and procedures.</p> <p>Replaces BSBCUS301A Deliver and monitor a service to customers</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to identify customer needs and monitor service provided to customers. Operators may exercise discretion and judgement using appropriate theoretical knowledge of customer service to provide technical advice and support to customers over either a short or long term interaction.

Application of the Unit

This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Identify customer needs	<p>1.1 Use <i>appropriate interpersonal skills</i> to accurately identify and clarify <i>customer needs and expectations</i></p> <p>1.2 Assess customer needs for urgency to determine priorities for service delivery according to <i>organisational requirements</i></p> <p>1.3 Use <i>effective communication</i> to inform customers about available choices for meeting their needs and assist in the selection of preferred options</p> <p>1.4 Identify limitations in addressing customer needs and seek appropriate assistance from <i>designated individuals</i></p>
2. Deliver a service to customers	<p>2.1 Provide prompt service to customers to meet identified needs in accordance with organisational requirements</p> <p>2.2 Establish and maintain appropriate rapport with customers to ensure completion of quality service delivery</p> <p>2.3 Sensitively and courteously handle <i>customer complaints</i> in accordance with organisational requirements</p> <p>2.4 Provide assistance or respond to customers with <i>specific needs</i> according to organisational requirements</p> <p>2.5 Identify and use available <i>opportunities</i> to promote and enhance services and products to customers</p>
3. Monitor and report on service delivery	<p>3.1 Regularly review customer satisfaction with service delivery using <i>verifiable evidence</i> according to organisational requirements</p> <p>3.2 Identify opportunities to enhance the quality of service and products, and pursue within organisational requirements</p> <p>3.3 Monitor procedural aspects of service delivery for effectiveness and suitability to customer requirements</p>

	<p>3.4 Regularly seek customer feedback and use to improve the provision of products and services</p> <p>3.5 Ensure reports are clear, detailed and contain recommendations focused on critical aspects of service delivery</p>
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Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to identify trends and positions of products and services
- communication skills to monitor and advise on customer service strategies
- literacy skills to:
 - edit and proofread texts to ensure clarity of meaning and accuracy of grammar and punctuation
 - prepare general information and papers according to target audience
 - read and understand a variety of texts
- problem-solving skills to deal with customer enquiries or complaints
- technology skills to select and use technology appropriate to a task
- self-management skills to:
 - comply with policies and procedures
 - consistently evaluate and monitor own performance
 - seek learning opportunities.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - financial legislation
 - occupational health and safety (OHS)
- organisational policy and procedures for customer service including handling customer complaints
- service standards and best practice models
- public relations and product promotion
- techniques for dealing with customers, including customers with specific needs.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • identifying needs and priorities of customers • distinguishing between different levels of customer satisfaction • treating customers with courtesy and respect • responding to and reporting on, customer feedback • knowledge of organisational policy and procedures for customer service.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of customer complaints • examples of documents relating to customer service standards and policies.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of reports on customer service delivery • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of customer service strategies.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Appropriate interpersonal skills</i> may include:</p>	<ul style="list-style-type: none"> • listening actively to what the customer is communicating • providing an opportunity for the customer to confirm their request • questioning to clarify and confirm customer needs • seeking feedback from the customer to confirm understanding of needs • summarising and paraphrasing to check understanding of customer message • using appropriate body language.
<p><i>Customers</i> may include:</p>	<ul style="list-style-type: none"> • corporate customers • individual members of the organisation • individual members of the public • internal or external • other agencies.
<p><i>Customer needs and expectations</i> may include:</p>	<ul style="list-style-type: none"> • accuracy of information • advice or general information • complaints • fairness/politeness • further information • making an appointment • prices/value • purchasing organisation's products and services • returning organisation's products and services • specific information.
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> • access and equity principles and practice • anti-discrimination and related policy • defined resource parameters • goals, objectives, plans, systems and processes • legal and organisational policies, guidelines and requirements • OHS policies, procedures and programs • payment and delivery options • pricing and discount policies • quality and continuous improvement processes and

	<p>standards</p> <ul style="list-style-type: none"> • quality assurance and/or procedures manuals • replacement and refund policy and procedures • who is responsible for products or services.
Effective communication may include:	<ul style="list-style-type: none"> • giving customers full attention • maintaining eye contact, except where eye contact may be culturally inappropriate • speaking clearly and concisely • using active listening techniques • using appropriate language and tone of voice • using clear written information/communication • using non-verbal communication e.g. body language, personal presentation (for face-to-face interactions) • using open and/or closed questions.
Designated individuals may include:	<ul style="list-style-type: none"> • colleagues • customers • line management • supervisor.
Customer complaints may include:	<ul style="list-style-type: none"> • administrative errors such as incorrect invoices or prices • customer satisfaction with service quality • damaged goods or goods not delivered • delivery errors • product not delivered on time • service errors • warehouse or store room errors such as incorrect product delivered.
Specific needs of customers may relate to:	<ul style="list-style-type: none"> • age • beliefs/values • culture • disability • gender • language • religious/spiritual observances.
Opportunities to promote and enhance services and products may include:	<ul style="list-style-type: none"> • extending time lines • packaging procedures • procedures for delivery of goods • returns policy • system for recording complaints • updating customer service charter.
Verifiable evidence may include:	<ul style="list-style-type: none"> • customer satisfaction questionnaires • audit documentation and reports

	<ul style="list-style-type: none">• quality assurance data• returned goods• lapsed customers• service calls• complaints.
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Unit Sector(s)

Stakeholder Relations – Customer Service

Custom Content Section

Not applicable.

BSBCUS401B Coordinate implementation of customer service strategies

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i>.</p> <p>Revised unit. Performance criteria amended so that the learner is not required to 'incorporate evidence of customer satisfaction in decision to modify products or services'. Required skills updated to focus on learning and development practices and compliance with policy and procedures.</p> <p>Replaces BSBCUS401A Coordinate implementation of customer service strategies</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to advise on, carry out and evaluate customer service strategies, including the design of improvement strategies based on feedback. Operators may have responsibility to provide guidance or to delegate aspects of these tasks to others.

Application of the Unit

This unit applies to individuals with a broad knowledge of customer service strategies who contribute well developed skills in addressing customer needs and problems.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Advise on customer service needs	<p>1.1 Clarify and accurately assess customer needs using appropriate communication techniques</p> <p>1.2 Diagnose problems matching service delivery to customers and develop options for improved service within organisational requirements</p> <p>1.3 Provide relevant and constructive advice to promote the improvement of customer service delivery</p> <p>1.4 Use business technology and/or online services to structure and present information on customer service needs</p>
2. Support implementation of customer service strategies	<p>2.1 Ensure customer service strategies and opportunities are promoted to designated individuals and groups</p> <p>2.2 Identify and allocate available budget resources to fulfil customer service objectives</p> <p>2.3 Promptly action procedures to resolve customer difficulties and complaints within organisational requirements</p> <p>2.4 Ensure that decisions to implement strategies are taken in consultation with designated individuals and groups</p>
3. Evaluate and report on customer service	<p>3.1 Review client satisfaction with service delivery using verifiable data in accordance with organisational requirements</p> <p>3.2 Identify and report changes necessary to maintain service standards to designated individuals and groups</p> <p>3.3 Prepare conclusions and recommendations from verifiable evidence and provide constructive advice on future directions of</p>

	client service strategies 3.4 Maintain systems, records and reporting procedures to compare changes in customer satisfaction
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Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to
 - communicate effectively with personnel and clients at all levels
 - articulate customer service strategies
- interpersonal skills to:
 - build relationships with customers
 - establish rapport
- literacy skills to:
 - prepare general information and papers
 - read a variety of texts
 - write formal and informal letters according to target audience
- planning skills to develop implementation schedules
- problem-solving skills to diagnose organisational problems relating to customer services
- self-management skills to:
 - comply with policies and procedures
 - consistently evaluate and monitor own performance
 - seek learning opportunities.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - environmental issues
 - occupational health and safety (OHS)
- principles of customer service
- organisational business structure, products and services
- product and service standards and best practice models.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • identifying needs and priorities of the organisation in delivering services to customers • responding to and reporting on customer feedback • designing strategies to improve delivery of products and services • knowledge of the principles of customer service.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of customer complaints, feedback and strategies.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of documentation reporting changes necessary to maintain service standards • analysis of responses to case studies and scenarios • demonstration of techniques • observation of presentations • oral or written questioning to assess knowledge of customer service techniques and strategies • review of systems, records and reporting procedures to compare changes in customer satisfaction.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Customer needs may relate to:	<ul style="list-style-type: none"> • accuracy of information • advice or general information • complaints • fairness/politeness • further information • making an appointment • prices/value • purchasing organisation's products and services • returning organisation's products and services • specific information.
Communication techniques may include:	<ul style="list-style-type: none"> • analysing customer satisfaction surveys • analysing quality assurance data • conducting interviews • consultation methods, techniques and protocols • making recommendations • obtaining management decisions • questioning • seeking feedback to confirm understanding • summarising and paraphrasing.
Customers may include:	<ul style="list-style-type: none"> • corporate customers • individual members of the organisation • individual members of the public • internal or external • other agencies.
Organisational requirements may include:	<ul style="list-style-type: none"> • access and equity principles and practice • anti-discrimination and related policy • confidentiality and security requirements • defined resource parameters • ethical standards • goals, objectives, plans, systems and processes • legal and organisational policies, guidelines and requirements • OHS policies, procedures and programs

	<ul style="list-style-type: none"> • payment and delivery options • pricing and discount policies • quality and continuous improvement processes and standards • quality assurance and/or procedures manuals • replacement and refund policy and procedures • who is responsible for products or services.
<i>Business technology</i> may include:	<ul style="list-style-type: none"> • answering machine • binder • computer • fax machine • photocopier • printer • shredder • telephone.
<i>Online services</i> may include:	<ul style="list-style-type: none"> • access to product database by customers online • access to purchase, delivery and account records • contact centre • online ordering • online payments • online registration • quick/reasonable response • two-way communication online.
<i>Designated individuals and groups</i> may include:	<ul style="list-style-type: none"> • colleagues • committee • customers • external organisation • line management • supervisor.
<i>Procedures to resolve customer difficulties</i> may include:	<ul style="list-style-type: none"> • external agencies (e.g. Ombudsman) • item replacement • referrals to supervisor • refund of monies • review of products or services • using conflict management techniques.

<p><i>Customer complaints</i> may include:</p>	<ul style="list-style-type: none"> • administrative errors such as incorrect invoices or prices • customer satisfaction with service quality • damaged goods or goods not delivered • delivery errors • products not delivered on time • service errors • specific e-business problems and issues: <ul style="list-style-type: none"> • difficulty accessing services • inactive links • not appreciating differing hardware and software • services not available • supply errors such as incorrect product delivered • time taken to access services • unfriendly website design • website faults • warehouse or store room errors such as incorrect product delivered.
<p>Customer service <i>strategies</i> may include:</p>	<ul style="list-style-type: none"> • courtesy/politeness • delivery times • merchandise characteristics • price offers • product/refund guarantees • product/service availability.

Unit Sector(s)

Stakeholder Relations – Customer Service

Custom Content Section

Not applicable.

BSBCUS402B Address customer needs

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i>.</p> <p>Revised unit. Required skills updated to focus on learning and development practices and compliance with policy and procedures.</p> <p>Replaces BSBCUS402A Address customer needs</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to manage the ongoing relationship with a customer, which includes assisting the customer to articulate their needs, meeting customer needs and managing networks to ensure customer needs are addressed. The customer relationship would typically involve direct interaction a number of times over an extended period.

This unit is appropriate to workers who are expected to have detailed product knowledge in order to recommend customised solutions. They would be expected to apply organisational procedures and be aware of, and apply as appropriate, broader factors involving ethics, industry practice and relevant government policies and regulations.

Application of the Unit

This unit applies to workers required to be familiar with a product and service that varies widely and is capable of significant customisation.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Assist customer to articulate needs	<p>1.1 Ensure customer needs are fully explored, understood and agreed</p> <p>1.2 Explain and match available services and products to customer needs</p> <p>1.3 Identify and communicate rights and responsibilities of customers to the customer as appropriate</p>
2. Satisfy complex customer needs	<p>2.1 Explain possibilities for meeting customer needs</p> <p>2.2 Assist customers to evaluate service and/or product options to satisfy their needs</p> <p>2.3 Determine and prioritise preferred actions</p> <p>2.4 Identify potential areas of difficulty in customer service delivery and take appropriate actions in a positive manner</p>
3. Manage networks to ensure customer needs are addressed	<p>3.1 Establish effective regular communication with customers</p> <p>3.2 Establish, maintain and expand relevant networks to ensure appropriate referral of customers to products and services from within and outside the organisation</p> <p>3.3 Ensure procedures are in place to ensure that decisions about targeting of customer services are based on up-to-date information about the customer, and the products and services available</p> <p>3.4 Ensure procedures are put in place to ensure that referrals are based on the matching of the assessment of customer needs and availability of products and services</p> <p>3.5 Maintain records of customer interaction in accordance with</p>

	<i>organisational procedures</i>
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Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to relate to people from diverse backgrounds and people with diverse abilities.
- information management skills to summarise information verbally and non-verbally
- literacy and numeracy skills to:
 - interpret product and service features or sales data
 - read a variety of texts to prepare general information and papers
 - summarise information obtained from a variety of verbal and non-verbal sources
 - write formal and informal text
- numeracy skills to analyse data, and to compare time lines and promotional costs against budgets
- problem-solving skills to develop solutions unique to a customer
- self-management skills to:
 - comply with policies and procedures
 - seek learning and development opportunities.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - environmental issues
 - occupational health and safety
- organisational procedures and standards for customer service relationships
- detailed product and service knowledge which may:
 - be of significant breadth so as to propose alternative products and services, or
 - of significant depth so as to propose variations within a limited product and service range.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • assisting customers to articulate their needs • documenting processes used and customer satisfaction with the products/services offered • assisting customers to address their needs.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of products/services and promotional strategies.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of documentation prioritising preferred actions • analysis of responses to case studies and scenarios • demonstration of techniques • observation of presentations • assessment of written reports • evaluation of communication established with customers • review of customer interaction records.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Customers may include:	<ul style="list-style-type: none"> • customers with routine or specific requests • in person, computer-based and telephone customers • internal and external customers • people from a range of social, cultural or ethnic backgrounds • people who may be unwell, drug affected or emotionally distressed • people with varying physical and mental abilities • regular and new customers.
Rights and responsibilities of customers may include:	<ul style="list-style-type: none"> • fulfilment of external obligations • informed consent.
Effective regular communication may include:	<ul style="list-style-type: none"> • giving customers full attention • handling sensitive and confidential issues • maintaining eye-contact (for face-to-face interactions), except where eye-contact may be culturally inappropriate • speaking clearly and concisely • using active listening techniques • using appropriate language and tone of voice • using clearly written information/communication • using non-verbal communication e.g. body language, personal presentation (for face-to-face interactions) • using open and/or closed questions.
Products and services may include:	<ul style="list-style-type: none"> • either products or services • goods • ideas • infrastructure • private or public sets of benefits.
Organisational procedures may include:	<ul style="list-style-type: none"> • procedural manuals • quality systems, standards and guidelines.

Unit Sector(s)

Stakeholder Relations – Customer Service

Custom Content Section

Not applicable.

BSBCUS501C Manage quality customer service

Modification History

Release	Comments
Release 1	<p>New release of this Qualification released with <i>version 6 of BSB07 Business Services Training Package</i>.</p> <p>Revised unit. Required skills updated to focus on learning and development practices and compliance with policy and procedures.</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop strategies to manage organisational systems that ensure products and services are delivered and maintained to standards agreed by the organisation.

Operators may have staff involved in delivering customer service and are responsible for the quality of their work. In many instances the work will occur within the organisation's policies and procedures framework. At this level, the exercise of considerable discretion and judgement, using a range of problem solving and decision making strategies, will be required.

Application of the Unit

Many managers are involved in ensuring that products and services are delivered and maintained to standards agreed by the organisation.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Plan to meet internal and external customer requirements	<p>1.1 Investigate, identify, assess, and include the needs of customers in planning processes</p> <p>1.2 Ensure plans achieve the quality, time and cost specifications agreed with customers</p>
2. Ensure delivery of quality products and services	<p>2.1 Deliver products and services to customer specifications within organisation's business plan</p> <p>2.2 Monitor team performance to consistently meet the organisation's quality and delivery standards</p> <p>2.3 Assist colleagues to overcome difficulty in meeting customer service standards</p>
3. Monitor, adjust and review customer service	<p>3.1 Develop and use strategies to monitor progress in achieving product and/or service targets and standards</p> <p>3.2 Develop and use strategies to obtain customer feedback to improve the provision of products and services</p> <p>3.3. Develop, procure and use resources effectively to provide quality products and services to customers</p> <p>3.4 Make decisions to overcome problems and to adapt customer services, products and service delivery in consultation with appropriate individuals and groups</p> <p>3.5 Manage records, reports and recommendations within the organisation's systems and processes</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to identify trends and positions of products and services
- communication skills to:
 - coach and mentor staff and colleagues
 - monitor and advise on customer service strategies
- literacy skills to:
 - edit and proofread texts to ensure clarity of meaning and accuracy of grammar and punctuation
 - prepare general information and papers according to target audience
 - read and understand a variety of texts
- problem-solving skills to:
 - deal with customer enquiries or complaints
 - deal with complex and non-routine difficulties
- technology skills to select and use technology appropriate to a task
- self-management skills to:
 - comply with policies and procedures
 - consistently evaluate and monitor own performance
 - seek learning opportunities.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - Australian consumer law
 - ethical principles
 - codes of practice
 - privacy laws
 - financial legislation
 - occupational health and safety (OHS)
- organisational policy and procedures for customer service including handling customer complaints
- service standards and best practice models
- public relations and product promotion
- techniques for dealing with customers, including customers with specific needs
- techniques for solving complaints including the principles and techniques involved in the management and organisation of:
 - customer behaviour
 - customer needs research
 - customer relations
 - ongoing product and/or service quality

- problem identification and resolution
- quality customer service delivery
- record keeping and management methods
- strategies for monitoring, managing and introducing ways to improve customer service relationships
- strategies to obtain customer feedback.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • plans, policies or procedures for delivering quality customer service • demonstrated techniques in solving complex customer complaints and system problems that lead to poor customer service • knowledge of techniques for solving complaints.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • assessment of written reports • demonstration of techniques • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of performance in role plays • evaluation of leadership, supervision, coaching and mentoring used to assist colleagues to overcome difficulty in meeting customer service standards • review of strategies developed and used to monitor progress in achieving product and/or service targets and standards • review of records, reports and recommendations about managing customer service.

Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Customers</i> may be:	<ul style="list-style-type: none"> • Board members • clients, purchasers of services • co-workers, peers and fellow frontline managers • members of the general public who make contact with the organisation, such as prospective purchasers of services • potential funding bodies • supervisors • suppliers of goods and services and contractors providing goods and services.
<i>Quality</i> may refer to:	<ul style="list-style-type: none"> • characteristics of a product, system, service or process that meet the requirements of customers and interested parties.
<i>Products and services</i> may include:	<ul style="list-style-type: none"> • either products or services • goods • ideas • infrastructure • private or public sets of benefits.
<i>Strategies</i> may refer to:	<ul style="list-style-type: none"> • databases and other controls to record and compare data over time • electronic feedback mechanisms using intranet, internet and email • feedback forms and other devices to enable communication from customers • long-term or short-term plans for monitoring achievement and evaluating effectiveness • policies and procedures • questionnaires, survey and interviews • training and development activities.

<i>Resources</i> may include:	<ul style="list-style-type: none">• buildings/facilities• equipment• finance• information• people• power/energy• technology• time.
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Unit Sector(s)

Stakeholder Relations – Customer Service

Custom Content Section

Not applicable.

BSBFIA301A Maintain financial records

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to maintain financial records for a business. It includes maintaining daily financial records such as reconciling debtors' and creditors' systems, preparing and maintaining a general ledger, and preparing a trial balance. It also includes activities associated with monitoring cash control for accounting purposes.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts. They may exercise discretion and judgement using appropriate theoretical knowledge of financial records to provide technical advice and support to a team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain daily financial records	<p>1.1. Correctly maintain daily financial records and in accordance with <i>organisational requirements</i> for accounting purposes</p> <p>1.2. Identify and rectify or refer <i>discrepancies</i> or errors in <i>documentation</i> or transactions to <i>designated persons</i> in accordance with organisational requirements</p> <p>1.3. Accurately credit and debit transactions and promptly enter into <i>journals</i> in accordance with organisational requirements</p>
2. Maintain general ledger	<p>2.1. Maintain general ledger in accordance with organisational requirements</p> <p>2.2. Post <i>transactions</i> into general ledger in accordance with organisational reporting requirements</p> <p>2.3. <i>Reconcile systems for accounts payable and receivable</i> with general ledger</p> <p>2.4. Accurately prepare trial balance from general ledger in accordance with organisational requirements</p>
3. Monitor cash control	<p>3.1. Ensure cash flow is accurately accounted for in accordance with organisational requirements</p> <p>3.2. Make and receive <i>payments</i> in accordance with</p>

ELEMENT	PERFORMANCE CRITERIA
	organisational requirements 3.3. Collect or follow-up outstanding accounts within designated time lines 3.4. Check payment documentation for accuracy of information and despatch to creditors within <i>designated time line</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to identify financial information; to read and understand the organisation's accounting procedures; and to edit and proofread documents to ensure conformity and consistency of information
- communication skills to clarify information and to refer errors or discrepancies to appropriate people
- numeracy skills to read and interpret financial data and to prepare cash analysis sheets
- problem-solving skills to reconcile figures.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - financial legislation
 - occupational health and safety (OHS)
- organisational policies and procedures relating to maintaining financial records
- definition of credits/creditors and debits/debtors
- principles of double entry bookkeeping and accrual accounting
- methods of presenting financial data.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • identifying and responding to discrepancies and errors • transferring and recording financial data accurately • reconciling expenditures and revenue • knowledge of organisational policies and procedures relating to maintaining financial records.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of source documents relating to financial record keeping.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of identification and rectification or referral of discrepancies or errors in documentation or transactions • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of financial record keeping • examples of financial documentation.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • general administration units • other financial administration units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> • designated time lines • guidelines for reconciling journals • legal and organisational policies, guidelines and requirements • OHS policies, procedures and programs • procedures for totalling adjusted journals • quality assurance and/or procedures manuals • resolution procedures • security procedures
<p><i>Discrepancies</i> may relate to:</p>	<ul style="list-style-type: none"> • bank charges • dishonoured cheques • errors in transposing between source documents and journals • interest
<p><i>Documentation</i> may include:</p>	<ul style="list-style-type: none"> • purchase credit notes • purchase invoices • sales credit notes • sales invoices
<p><i>Designated persons</i> may include:</p>	<ul style="list-style-type: none"> • bank • line management • organisation's authorisations department • statutory body • supervisor
<p><i>Journals</i> may include:</p>	<ul style="list-style-type: none"> • cash payments • cash receipts • purchases and purchase returns • sales and sales returns
<p><i>Transactions</i> may include:</p>	<ul style="list-style-type: none"> • commencing business entries • correction of posting errors • interest expense

RANGE STATEMENT	
	<ul style="list-style-type: none"> • interest receivable • non-cash transactions (e.g. writing-off depreciation, stock losses) • purchase of a fixed asset on credit • sale of a fixed asset on credit • withdrawal of stock/assets by owner • write-off a bad debt
<i>Reconciling systems for accounts payable and receivable</i> may include:	<ul style="list-style-type: none"> • checking accuracy of creditor account balances (e.g. cash payments journal, purchases journal, purchases returns journal, general journal) • checking accuracy of debtor account balances (e.g. cash receipts journal, sales return journal, general journal) • checking cash payments and receipt journals against bank statement • checking the total of the creditor's schedule equals the balance of the creditor's control account • checking the total of the debtor's schedule equals the balance of the debtor's control account
<i>Payments</i> may include:	<ul style="list-style-type: none"> • cash • cheque • credit card • direct debit
<i>Designated time lines</i> may include:	<ul style="list-style-type: none"> • by month end • monthly • within agreed period • within organisational deadline

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Finance - Financial Administration
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Co-requisite units

Co-requisite units	

BSBFIM501A Manage budgets and financial plans

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to undertake financial management within a work team in an organisation. This includes planning and implementing financial management approaches, supporting team members whose role involves aspects of financial operations, monitoring and controlling finances, and reviewing and evaluating effectiveness of financial management processes in line with the financial objectives of the work team and the organisation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit addresses the requirement for managers to ensure that financial resources are used effectively. This is done by ensuring access to budget/s and ongoing monitoring expenditure against the budget/s.</p> <p>The unit applies to managers working in small and large business environments and not for profit organisations.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan financial management approaches	1.1. Access <i>budget/financial plans</i> for the work team 1.2. Clarify budget/financial plans with <i>relevant personnel</i> within the organisation to ensure that documented outcomes are achievable, accurate and comprehensible 1.3. Negotiate any changes required to be made to budget/financial plans with relevant personnel within the organisation 1.4. Prepare <i>contingency plans</i> in the event that initial plans need to be varied
2. Implement financial management approaches	2.1. Disseminate relevant details of the agreed budget/financial plans to team members 2.2. Provide <i>support</i> to ensure that team members can competently perform <i>required roles</i> associated with the management of finances 2.3. Determine and access <i>resources and systems</i> to manage financial management processes within the

ELEMENT	PERFORMANCE CRITERIA
	work team
3. Monitor and control finances	3.1. Implement <i>processes</i> to monitor actual expenditure and to control costs across the work team 3.2. Monitor expenditure and costs on an agreed cyclical basis to identify cost variations and expenditure overruns 3.3. Implement, monitor and modify contingency plans as required to maintain financial objectives 3.4. Report on budget and expenditure in accordance with organisational protocols
4. Review and evaluate financial management processes	4.1. Collect and collate for analysis, <i>data and information on the effectiveness of financial management processes</i> within the work team 4.2. Analyse data and information on the effectiveness of financial management processes within the work team and identify, document and recommend any improvements to existing processes 4.3. Implement and monitor agreed improvements in line with financial objectives of the work team and the organisation

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- numeracy skills to read and understand a budget and to update a budget
- technology skills to use software associated with financial record keeping.

Required knowledge

- basic accounting principles
- organisational requirements related to financial management
- relevant legislation and current requirements of the Australian Taxation Office, including GST
- requirements for organisational record keeping and auditing
- principles and techniques involved in:
 - budgeting

REQUIRED SKILLS AND KNOWLEDGE

- cash flows
- electronic spreadsheets
- GST
- ledgers and financial statements
- profit and loss statements.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- financial skills required to work with and interpret budgets, ageing summaries, cash flow, petty cash, GST, and profit and loss statements
- knowledge of the record keeping requirements for the ATO and for auditing purposes.

Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- assessment of written reports indicating broad knowledge of managing budgets and managing financial resources in the organisation
- demonstration of techniques using financial record keeping software
- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- oral or written questioning to assess knowledge of requirements for organisational record keeping and auditing

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • review of contingency plans • review of identification of cost variations and expenditure overruns • evaluation of documentation reporting on budget and expenditure • review of documentation identifying and recommending improvements to financial management processes.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other units from the Diploma of Management.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Budget/financial plans</i> may include:	<ul style="list-style-type: none"> • cash flow projections • long-term budgets/plans • operational plans • short-term budgets/plans • spreadsheet-based financial projections • targets or key performance indicators for production, productivity, wastage, sales, income and expenditure
<i>Relevant personnel</i> may include:	<ul style="list-style-type: none"> • financial managers, accountants or financial controllers • supervisors, other frontline managers
<i>Contingency plans</i> may include:	<ul style="list-style-type: none"> • contracting out or outsourcing human resources and other functions or tasks • diversification of outcomes • finding cheaper or lower quality raw materials and consumables

RANGE STATEMENT	
	<ul style="list-style-type: none"> • increasing sales or production • recycling and re-using • rental, hire purchase or alternative means of procurement of required materials, equipment and stock • restructuring of organisation to reduce labour costs • risk identification, assessment and management processes • seeking further funding • strategies for reducing costs, wastage, stock or consumables • succession planning
<i>Support</i> may include:	<ul style="list-style-type: none"> • access to specialist advice • documentation of procedures • help desk or identified experts within the organisation • information briefings or sessions • intranet-based information • training including mentoring, coaching and shadowing
<i>Required roles</i> may include:	<ul style="list-style-type: none"> • arranging for use of corporate credit cards • banking • debt collection • ensuring security, accuracy and currency of financial operations • invoicing clients, customers and consumers • maintaining journals, ledgers and other record keeping systems • maintaining petty cash system • purchasing and procurement • wages and salaries payments and record keeping
<i>Resources and systems</i> may include:	<ul style="list-style-type: none"> • hardware and software • human, physical or financial resources • record keeping systems (electronic and paper-based) • specialist advice or support
<i>Processes</i> to monitor actual expenditure and to control costs across the work team include:	<ul style="list-style-type: none"> • reporting of: <ul style="list-style-type: none"> • assets • consumables

RANGE STATEMENT	
	<ul style="list-style-type: none"> • equipment • expenditure • income • stock • wastage
<i>Reporting</i> may include data from:	<ul style="list-style-type: none"> • bank statements • credit card statements • financial reports • invoices and receipts • ledgers and journals • logs • petty cash records • spreadsheet-based records
<i>Data and information on the effectiveness of financial management processes</i> may include records (paper-based and electronic) related to:	<ul style="list-style-type: none"> • bank account records • cash flow data • contracts • credit card receipts • employee timesheets • files of paid purchase and service invoices • income and expenditure • insurance reports • invoices • job costings • petty cash receipts • quotations • taxation records • wages/salaries books

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBFLM303C Contribute to effective workplace relationships

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to gather information and maintain effective working relationships and networks, with particular regard to communication and representation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Frontline managers have a key role in contributing to efficient and effective work teams within the context of the organisation. They play a prominent part in motivating, mentoring, coaching and developing team cohesion through providing leadership for the team and forming the bridge between the management of the organisation and the team members.</p> <p>At this level, work will normally be carried out within known routines, methods and procedures which require the exercise of some discretion and judgement.</p> <p>This unit is related to BSBWOR401A Establish effective workplace relationships.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Seek, receive and communicate information and ideas	<p>1.1. Collect <i>information</i> associated with the achievement of work responsibilities from appropriate <i>sources</i></p> <p>1.2. Communicate ideas and information to <i>diverse audiences</i> in an appropriate and sensitive manner</p> <p>1.3. Seek contributions from internal and external sources to develop and refine new ideas and approaches in accordance with organisational processes</p> <p>1.4. Facilitate <i>consultation processes</i> to allow employees to contribute to issues related to their work, and promptly communicate outcomes of consultation to the work team</p> <p>1.5. Promptly deal with and resolve issues raised, or refer them to <i>relevant personnel</i></p>
2. Encourage trust and	2.1. Treat people with integrity, respect and empathy

ELEMENT	PERFORMANCE CRITERIA
confidence	2.2. Encourage effective relationships within the framework of <i>the organisation's social, ethical and business standards</i> 2.3. Gain and maintain the trust and confidence of <i>colleagues, customers and suppliers</i> through competent performance 2.4. Adjust interpersonal styles and methods in relation to the organisation's social and cultural environment
3. Identify and use networks and relationships	3.1. Identify and utilise <i>workplace networks</i> to help build relationships 3.2. Identify and describe the value and benefits of networks and other work relationships for the team and the organisation
4. Contribute to positive outcomes	4.1. Identify difficulties and take action to rectify the situation within own level of responsibility according to organisational and legal requirements 4.2. Support colleagues in resolving work difficulties 4.3. Regularly review <i>workplace outcomes</i> and implement improvements in consultation with relevant personnel 4.4. Identify and resolve <i>poor work performance</i> within own level of responsibility and according to organisational policies 4.5. Deal constructively with conflict, within the organisation's established processes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- coaching and mentoring skills to provide support to colleagues
- functional literacy skills to access and use workplace information
- relationship management and communication skills to:
 - interpret information from a variety of people
 - respond to unexpected demands from a range of people

REQUIRED SKILLS AND KNOWLEDGE

- gain the trust and confidence of colleagues
- deal with people openly and fairly
- forge effective relationships with internal and/or external people.

Required knowledge

- principles and techniques associated with relationship management, including:
 - developing trust and confidence
 - behaving consistently in work relationships
 - identifying the cultural and social environment
 - identifying and assessing interpersonal styles
 - establishing networks
 - identifying and resolving problems
 - handling conflict
 - managing poor work performance
 - monitoring and improving work relationships
 - using anti-discrimination/bias strategies and making contributions
- relevant legislation from all levels of government that may affect business operation, especially in regard to:
 - occupational health and safety and environmental issues
 - equal opportunity
 - industrial relations
 - anti-discrimination.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- using culturally appropriate communication techniques to share work-based information with teams and individuals in accordance with organisation policies
- developing networks and building team relationships

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> regularly reviewing workplace outcomes to identify and resolve issues and implement improvements within own level of responsibility and according to organisational policies.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate oral or written questioning to assess knowledge and understanding of principles of relationship management and organisation's social, ethical and business standards presentation of examples of actions taken by the candidate to build networks and contribute to positive workplace relationships and outcomes.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other management or frontline management units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Information may include:	<ul style="list-style-type: none"> archived, filed and historical background data electronic or manual transmission individual and team performance data marketing and customer-related data

RANGE STATEMENT	
	<ul style="list-style-type: none"> • organisation policies and procedures • planning and organisational documents including the outcomes of continuous improvement and quality assurance • written or verbal communications
<i>Sources</i> of information may be:	<ul style="list-style-type: none"> • external, such as: <ul style="list-style-type: none"> • external customers • web based resources • reports • internal, such as: <ul style="list-style-type: none"> • supervisors, managers and peers • organisation policies and procedures • workplace documents
<i>Diverse audiences</i> may include:	<ul style="list-style-type: none"> • persons with specific social, cultural and other needs that require a range of strategies and approaches including adjusting communication
<i>Consultation processes</i> may include:	<ul style="list-style-type: none"> • feedback to the work team and relevant personnel in relation to outcomes of the consultation process • opportunity for employees to contribute ideas and information
<i>Relevant personnel</i> may include:	<ul style="list-style-type: none"> • OHS committees and OHS representatives • people with specialist responsibilities • supervisors, managers and other employees • union representatives/groups
<i>The organisation's social, ethical and business standards</i> may refer to:	<ul style="list-style-type: none"> • implied standards such as honesty and respect relative to the organisation culture and generally accepted within the wider community • rewards and recognition for high performing staff • standards expressed in legislation and regulations such as anti-discrimination legislation • written standards such as those expressed in: <ul style="list-style-type: none"> • vision and mission statements • policies • code of workplace conduct/behaviour • dress code • statement of workplace values

RANGE STATEMENT	
<i>Colleagues, customers and suppliers</i> may include:	<ul style="list-style-type: none"> • employees at the same level and more senior managers • internal and external contacts • people from a wide variety of social, cultural and ethnic backgrounds • team members
<i>Workplace networks</i> may be:	<ul style="list-style-type: none"> • formal or informal • individuals or groups • internal or external • structured or unstructured
<i>Workplace outcomes</i> may include:	<ul style="list-style-type: none"> • OHS processes and procedures • performance of the work team
<i>Poor work performance</i> may relate to:	<ul style="list-style-type: none"> • self or work team; or it may extend to the organisation as a whole

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Frontline Management
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Co-requisite units

Co-requisite units	

BSBFLM305C Support operational plan

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to provide support for operational practices and procedures within the organisation's productivity and profitability plans. This includes contributing to the operational plan, assisting in recruiting employees and acquiring resources, and monitoring and adjusting operational performance.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Frontline managers are actively engaged in planning activities to achieve the measurable, stated objectives of the team and the organisation. This key role is carried out to provide safe, efficient and effective products and services to customer satisfaction within the organisation's productivity and profitability plans.</p> <p>At this level, work will normally be carried out within known routines, methods and procedures, and may also involve a number of complex or non routine activities that require some discretion and judgement.</p> <p>This unit is related to BSBMGT402A Implement operational plan.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Contribute to implementation of operational plan	1.1. Collect and record details of <i>resource requirements</i> and report to <i>relevant personnel</i> 1.2. Ensure the <i>operational plan</i> contributes to the achievement of the organisation's performance and business plan 1.3. Identify <i>key performance indicators</i> to measure own and work team's performance 1.4. Undertake <i>contingency planning</i> as required 1.5. Support the development and presentation of proposals for resource requirements as required
2. Assist in recruiting employees and acquiring resources	2.1. Assist with employee recruitment and/or induction as required, within <i>the organisation's policies, practices and procedures</i> 2.2. Acquire physical resources and services according

ELEMENT	PERFORMANCE CRITERIA
	to the organisation's policies, practices and procedures and in consultation with relevant personnel
3. Support operations	<p>3.1. Identify and utilise <i>performance systems and processes</i> to assess team progress in achieving plans and targets</p> <p>3.2. Compare actual productivity and performance with identified short-term budgets, targets and performance results</p> <p>3.3. Identify and report unsatisfactory performance to relevant personnel, to enable action to be taken to rectify the situation</p> <p>3.4. Provide coaching to support individuals and teams to use resources effectively, economically and safely</p> <p>3.5. Support <i>consultation processes</i> for the development and/or variation of the operational plan as required</p> <p>3.6. Present recommendations for variation to operational plans to relevant personnel</p> <p>3.7. Follow performance <i>systems, procedures and recording processes</i> in accordance with organisation requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- coaching and mentoring skills to provide support to colleagues
- functional literacy skills to access and use workplace information
- skills to:
 - maintain a safe workplace and environment
 - access and use feedback to improve operational performance
 - prepare recommendations to improve operations
 - access and use established systems and processes.

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- principles and techniques of:
 - short-term operational scheduling
 - physical resources and services acquisition procedures and/or systems
 - budget and performance figures interpretation
 - performance monitoring within defined job role
 - performance reporting
 - problem identification and resolution
 - alternative approaches to improving resource usage and eliminating resource inefficiencies and waste within defined job role
- relevant legislation from all levels of government that may affect business operations, especially in regard to occupational health and safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- support for individuals and teams who have difficulty in performing to the required standard.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- sharing information with members of the work team about implementing and monitoring the operational plan
- assisting in planning resource acquisition and usage including human resources, risk management and contingency planning
- monitoring, analysing and reporting individual and team performance against identified targets.

Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

Method of assessment

A range of assessment methods should be used to assess

EVIDENCE GUIDE	
	<p>practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • records produced while working with the operational plan, such as: <ul style="list-style-type: none"> • suggestions for variations to the operational plan • rosters and staff allocation • short-term resource acquisition planning, contingency planning and/or risk management plans • induction programs conducted • suggestions and input into management decisions related to the operational plan • records of actions taken to address day-to-day resource shortfalls.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBFLM303C Contribute to effective workplace relationships • BSBFLM306C Provide workplace information and resourcing plans • BSBFLM312C Contribute to team effectiveness • BSBCMN311B Maintain workplace safety.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Resource requirements</i> may include:</p>	<ul style="list-style-type: none"> • purchasing or ordering of goods • stock requirements and requisitions

RANGE STATEMENT	
	<ul style="list-style-type: none"> supply of resources.
<i>Relevant personnel</i> may include:	<ul style="list-style-type: none"> colleagues, supervisors and managers OHS committees and other people with specialist responsibilities specialist resource managers unions/employee groups other employees.
<i>Operational plan</i> may include:	<ul style="list-style-type: none"> organisational plans tactical plans developed by the department or section to detail product and service performance.
<i>Key performance indicators</i> may refer to:	<ul style="list-style-type: none"> measures for monitoring or evaluating the efficiency or effectiveness of a system, and which may be used to demonstrate accountability and identify areas for improvements.
<i>Contingency planning</i> may refer to:	<ul style="list-style-type: none"> contracting or outsourcing human resource and other functions or tasks diversification of outcomes finding cheaper or lower quality raw materials and consumables increasing sales or production recycling and re-use rental, hire purchase or alternative means of procurement of required materials, equipment and stock restructuring of organisation to reduce labour costs risk identification, assessment and management processes seeking further funding strategies for reducing costs, wastage, stock or consumables succession planning.
<i>The organisation's policies practices and procedures</i> may include:	<ul style="list-style-type: none"> organisational guidelines which govern and prescribe operational functions, such as the acquisition and management of human and physical resources organisational culture Standard Operating Procedures undocumented practices in line with organisational operations.

RANGE STATEMENT	
<i>Performance systems and processes</i> may be:	<ul style="list-style-type: none"> formal or informal processes within the organisation, such as: <ul style="list-style-type: none"> Key Performance Indicators (KPIs) specified work outcomes individual and team work plans feedback arrangements informal systems used in the place of existing organisation-wide systems.
<i>Consultation processes</i> may refer to:	<ul style="list-style-type: none"> mechanisms used to provide feedback to the work team in relation to outcomes of consultation meetings, interviews, brainstorming sessions, email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual operational plans.
<i>Performance systems, procedures and recording processes</i> may include:	<ul style="list-style-type: none"> databases and other recording mechanisms individual and team performance plans organisational policies and procedures relative to performance.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Frontline Management
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Co-requisite units

Co-requisite units	
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Co-requisite units		

BSBFLM312C Contribute to team effectiveness

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This specifies the outcomes required to by frontline managers to contribute to the effectiveness of the work team. It involves planning with the team to meet expected outcomes, developing team cohesion, participating in and facilitating the work team, and communicating with the management of the organisation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Frontline managers have a key role in developing efficient and effective work teams within the context of the organisation. They play a prominent part in motivating, mentoring, coaching and developing team cohesion by providing leadership for the team and forming the bridge between the management of the organisation and the team members.</p> <p>At this level, work will normally be carried out within known routines, methods and procedures, and may also involve a number of complex or non routine activities that require some discretion and judgement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Contribute to team outcomes	1.1. Consult team members to identify <i>team purpose, roles, responsibilities, goals, plans and objectives</i> 1.2. Support team members to meet expected outcomes
2. Support team cohesion	2.1. Encourage team members to participate in the planning, decision making and operational aspects of the work team to their level of responsibility 2.2. Encourage team members to take responsibility for their own work and to assist each other in undertaking required roles and responsibilities 2.3. Provide <i>feedback</i> to team members to encourage, value and reward team members' efforts and contributions 2.4. Identify and address issues, concerns and problems identified by team members to <i>relevant persons</i> as

ELEMENT	PERFORMANCE CRITERIA
	required
3. Participate in work team	3.1. Actively encourage and support team members to participate in team activities and communication processes and to take <i>responsibility for their actions</i> 3.2. Support the team to identify and resolve problems which impede its performance 3.3. Utilise own contribution to work team to serve as a role model for others and enhance the organisation's image within the work team, the organisation and with clients/customers
4. Communicate with management	4.1. Maintain open <i>communication</i> with <i>line manager/management</i> at all times 4.2. Communicate information from line manager/management to the team 4.3. Communicate <i>unresolved issues</i> to line manager/management and follow-up to ensure action is taken in response to these matters

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills

- ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- communication skills, including listening
- basic training skills, including mentoring and coaching
- planning and organising skills
- problem solving skills
- attributes:
 - empathic
 - communicative
 - self aware
 - supportive
 - trusting

REQUIRED SKILLS AND KNOWLEDGE

- open
- flexible
- accommodating
- initiating
- loyal
- fair
- adaptable

Required knowledge**Required knowledge**

- relevant legislation from all levels of government that affects business operation, especially in regard to occupational health and safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- organisational policies and procedures
- organisational goals, objectives and plans at both tactical and strategic levels
- organisational structure including organisational chart
- learning and development options available within and through organisation
- a general understanding of the principles and techniques of:
 - group dynamics and processes
 - motivation
 - planning
 - negotiation
- individual behaviour and difference

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- demonstrate leadership in contributing to team plans
- lead and facilitate teamwork
- actively communicate with management
- manage communication within the team

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • induct new team members • implement performance management system • handle problems
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • that this unit can be assessed in the workplace or in a closely simulated work environment • access by the learner and trainer to appropriate documentation and resources normally used in the workplace • where assessment is part of a learning experience, evidence will need to be collected over a period of time, involving both formative and summative assessment • that examples of actions taken by candidate to contribute to team effectiveness are provided
Method of assessment	<p>A range of assessment methods should be used to assess skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • Direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • Records produced from working in a team, such as: <ul style="list-style-type: none"> • reports • minutes or records of meetings • work journals or diaries • learning and development plans developed with team members • records of actions taken to address issues raised by team members
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating

RANGE STATEMENT	
conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Legislation, codes and national standards relevant to the workplace may include:	<ul style="list-style-type: none"> • award and enterprise agreements and relevant industrial instruments • relevant legislation from all levels of government that affects business operation, especially in regard to occupational health and safety (OHS) and environmental issues, equal opportunity, industrial relations and anti-discrimination • relevant industry codes of practice
OHS considerations may include:	<ul style="list-style-type: none"> • provision of information about OHS legislative requirements, guidelines and the organisation's OHS policies, procedures and programs • training of all employees in health and safety procedures • participation in the regular update of OHS systems and procedures • changes to work practices, procedures and the working environment which impact on OHS
<i>Team purpose, roles, responsibilities, goals, plans and objectives</i> may include:	<ul style="list-style-type: none"> • goals for individuals and the work team • expected outcomes and outputs • individual and team performance plans and Key Performance Indicators (KPIs) • action plans, business plans and operational plans linked to strategic plans • OHS responsibilities
<i>Feedback</i> may refer to:	<ul style="list-style-type: none"> • communication of ideas and thoughts which focus on specific tasks, outcomes, decisions, issues or behaviours • formal/informal gatherings between team members where there is discussion on work-related matters
<i>Relevant persons</i> may include:	<ul style="list-style-type: none"> • frontline manager's direct superior or other management representatives • colleagues • designated personnel e.g. safety officer
<i>Responsibility for their actions</i>	<ul style="list-style-type: none"> • individuals and teams • individual and joint actions

RANGE STATEMENT	
may involve:	
<i>Communication</i> may include:	<ul style="list-style-type: none"> • verbal, written or electronic communication • face-to-face • formal/informal interaction
<i>Line manager/management</i> may refer to:	<ul style="list-style-type: none"> • frontline manager's direct superior or other management representatives
<i>Unresolved issues</i> may include:	<ul style="list-style-type: none"> • issues, concerns and tensions • problems related to work roles and responsibilities • grievances and complaints • any matters affecting workplace relationships and team cohesion

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Frontline Management services
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Co-requisite units

Co-requisite units		

BSBINM201A Process and maintain workplace information

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to collect, process, store and maintain workplace information and systems. It also includes the maintenance of filing and records systems.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who perform a range of routine tasks in the workplace, using a limited range of practical skills and fundamental knowledge of information and information systems in a defined context, under direct supervision or with limited individual responsibility.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect information	1.1. Collect <i>information</i> in a timely manner and ensure that it is relevant to organisational needs 1.2. Use <i>business equipment/technology</i> available in the work area to effectively obtain information 1.3. Apply <i>organisational requirements</i> relating to security and confidentiality in handling information
2. Process workplace information	2.1. Use business equipment/technology to process information in accordance with organisational requirements 2.2. Process information in accordance with defined timeframes, guidelines and procedures 2.3. Update, modify and file information in accordance with organisational requirements 2.4. Collate and despatch information in accordance with specified timeframes and organisational requirements
3. Maintain information systems	3.1. Maintain information and filing systems in accordance with organisational requirements 3.2. Identify, <i>remove</i> and/or <i>relocate inactive or dead files</i> in accordance with organisational requirements 3.3. Establish and assemble new files in accordance with organisational requirements 3.4. Update reference and index systems in accordance with organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to read and understand organisation's recordkeeping and information systems(including classification systems), to follow sequenced written instructions and to comprehend/interpret nature of record content
- numeracy skills to sequence and index files
- planning skills to organise work priorities and arrangements
- problem-solving skills to solve routine problems
- technology skills to select and use technology appropriate to maintaining workplace information.

Required knowledge

- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety
- organisational policies and procedures relating to collecting and processing workplace information
- organisational recordkeeping/filing systems and security procedures
- organisation's business and structure
- range of filing systems including paper-based and software-based.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

EVIDENCE GUIDE	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • applying organisational policies and procedures for collecting and processing workplace information • accuracy in recording and documenting information • correctly storing, classifying and maintaining documents and records.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of workplace information systems.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of maintenance of information and filing systems • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of the management of information in the workplace.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • general administration units • other information management units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

RANGE STATEMENT	
regional contexts) may also be included.	
Information may include:	<ul style="list-style-type: none"> • computer databases (library catalogue, customer records) • computer files (letters, memos and other documents) • correspondence (faxes, memos, letters, email) • forms (insurance forms, membership forms) • invoices (from suppliers, to debtors) • minutes of meetings • personnel records (personal details, salary rates) • sales records (monthly forecasts, targets achieved)
Business equipment/technology may include:	<ul style="list-style-type: none"> • answering machine • binder • computer • fax machine • filing systems (manual/computerised/electronic) • photocopier • printer • telephone
Organisational requirements may include:	<ul style="list-style-type: none"> • despatching and collecting procedures • legal and organisational policies, guidelines and requirements • OHS policies, procedures and programs • procedures for deciding which records should be captured and filed • procedures for updating records • security procedures
Removing inactive or dead files may include:	<ul style="list-style-type: none"> • compressing computer files prior to archiving • periodically archiving or deleting files • transferring files at regular intervals or routinely checking for dead or inactive files • transferring records from the active filing system to secondary storage
Relocating inactive or dead files may include:	<ul style="list-style-type: none"> • electronic (email, internet access, diskette, tape, CD-ROM) • microfilm • photographic material

RANGE STATEMENT

	• printed material
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Unit Sector(s)

Unit sector	
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Competency field

Competency field	Knowledge Management - Information Management
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Co-requisite units

Co-requisite units		

BSBINM301A Organise workplace information

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to gather, organise and apply workplace information in the context of an organisation's work processes and knowledge management systems.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts. They may exercise discretion and judgement using appropriate theoretical knowledge of information management to provide technical advice and support to a team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect and assess information	<p>1.1. Access product and service <i>information</i> in accordance with <i>organisational requirements</i></p> <p>1.2. Ensure <i>methods of collecting information</i> are reliable and make efficient use of available time and resources</p> <p>1.3. Assess information for clarity, accuracy, currency and relevance to intended tasks</p> <p>1.4. Use <i>interpersonal skills</i> to access relevant information from teams and individuals</p>
2. Organise information	<p>2.1. Organise information in a <i>format</i> suitable for analysis, interpretation and dissemination in accordance with organisational requirements</p> <p>2.2. Use appropriate <i>technology/systems</i> to maintain information in accordance with organisational requirements</p> <p>2.3. Collate information and materials, and communicate to relevant <i>designated persons</i></p> <p>2.4. Identify difficulties organising and accessing information and solve collaboratively with individuals and team members</p> <p>2.5. Update and store information in accordance with organisational requirements and systems</p>
3. Review information	3.1. Actively seek <i>feedback</i> on clarity, accuracy and

ELEMENT	PERFORMANCE CRITERIA
needs	<p>sufficiency of information to ensure relevance of information and system</p> <p>3.2. Review the contribution of information to decision making and implement appropriate modifications to collection processes</p> <p>3.3. Identify future information needs and incorporate in modifications to collection processes</p> <p>3.4. Document future information needs and incorporate in modifications to reporting processes</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to classify and report information
- literacy skills to read and understand a variety of texts; and to write, edit and proofread documents to ensure clarity of meaning, accuracy and consistency of information
- problem-solving skills to deal with information which is contradictory, ambiguous, inconsistent or inadequate
- technology skills to display information in a format suitable to the target audience.

Required knowledge

- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- methods for checking validity of information and its sources
- organisational recordkeeping/filing systems, security procedures and safe recording practices
- policies and procedures relating to distribution of workplace information, and legal and ethical obligations.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • providing accurate information for defined purposes • systematic maintenance and handling of data and documents • using business technology to manage information • knowledge of relevant legislation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of information documents found in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of organisational recordkeeping/filing systems • analysis of how information and materials were communicated to relevant people • review of documentation outlining future information needs.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBWRT301A Write simple documents • general administration units • other information management units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Information</i> may include:</p>	<ul style="list-style-type: none"> • computer databases (e.g. library catalogue, customer records) • computer files (e.g. letters, memos and other documents) • correspondence (e.g. faxes, memos, letters, email) • financial figures • forms (e.g. insurance forms, membership forms) • invoices (e.g. from suppliers, to debtors) • personnel records (e.g. personal details, salary rates) • production targets • sales records (e.g. monthly forecasts, targets achieved)
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> • code of conduct/code of ethics • information protocols • legal and organisational policies, guidelines and requirements • management and accountability channels • OHS policies, procedures and programs • procedures for updating records • quality assurance and/or procedures manuals • security and confidentiality requirements
<p><i>Methods of collecting information</i> may include:</p>	<ul style="list-style-type: none"> • checking research provided by others • checking written material including referrals and client files • classification tools • individual research • information from other organisations • interviews with colleagues/customers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • observation and listening • previous file records • questioning (in person or indirect) • recruitment applications and other forms
<i>Interpersonal skills</i> may include:	<ul style="list-style-type: none"> • consultation methods, techniques and protocols • networking • seeking feedback from group members to confirm understanding • summarising and paraphrasing • using appropriate body language
<i>Format</i> may include:	<ul style="list-style-type: none"> • adding headers and footers • incorporating graphics and pictures • inserting symbols • using legends • using a particular software application • using tables and charts
<i>Technology</i> may include:	<ul style="list-style-type: none"> • answering machine • computer • email • fax machine • internet/extranet/intranet • photocopier • shredder • telephone
<i>Systems</i> may include:	<ul style="list-style-type: none"> • information management systems • knowledge management systems • record management systems
<i>Designated persons</i> may include:	<ul style="list-style-type: none"> • clients • colleagues • committee • external agencies • line management • statutory bodies • supervisor
<i>Feedback</i> may include:	<ul style="list-style-type: none"> • audit documentation and reports • comments from clients and colleagues • customer satisfaction questionnaires • quality assurance data • returned goods

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Knowledge Management - Information Management
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Co-requisite units

Co-requisite units		

BSBINM401A IMPLEMENT WORKPLACE INFORMATION SYSTEM

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to implement the workplace information system. It involves the identification, acquisition, initial analysis and use of appropriate information, which plays a significant part in the organisation's effectiveness.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Frontline managers play a significant role in contributing to the organisation's effectiveness in identifying, acquiring, analysing and using appropriate information.</p> <p>At this level, work will normally be carried out within routine and non routine methods and procedures, which require planning and evaluation, leadership and guidance of others, and some discretion and judgement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and source information needs	1.1. Determine and locate <i>information</i> required by teams 1.2. Acquire and review information held by the organisation to determine suitability, accessibility, currency and reliability according to <i>organisational policies</i>
2. Collect, analyse and report information	2.1. Collect information, which is adequate and relevant to the needs of teams, in a timely manner 2.2. Ensure information is in a format suitable for analysis, interpretation and dissemination 2.3. Analyse information to identify and report relevant trends and developments in terms of the needs for which it was acquired
3. Implement information systems	3.1. Implement management information systems effectively to store, retrieve and regularly review data for decision making purposes 3.2. Use <i>technology</i> available in the work area to manage information effectively

ELEMENT	PERFORMANCE CRITERIA
	3.3. Submit recommendations for improving the information system to <i>designated persons and/or groups</i>
4. Prepare for information system changes	4.1. Collect information about information system future needs in consultation with <i>colleagues</i> , including those who have a specialist role in resource management 4.2. Ensure estimates of information system future needs reflect the organisation's <i>business plans</i> , and customer and supplier requirements 4.3. Support proposals to secure resources by clearly presenting submissions that describe realistic options, benefits, costs and outcomes 4.4. Prepare team members to work with new technology and information system changes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to work with information, and to research and present information in ways that are appropriate to the work team
- technology skills to work with a range of information systems.

Required knowledge

- information management systems and technology that would be associated with the workplace such as:
 - budgets and financial management systems
 - customer information software or records
 - databases
 - personal digital assistant (PDA)
 - product and service information
 - project management software
 - record management systems
 - spreadsheets.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> analysis of the information that is required for the effective functioning of the team's work together knowledge of the range of information systems that are, or should be, available in the workplace ability to recognise what information system changes and improvements will be required in the future.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> demonstration of techniques in working with information management systems direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate oral or written questioning to assess knowledge of relevant technology review of documentation analysing information trends and developments written reports on future information system needs review of preparation undertaken for team members to work with new technology and information system changes.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other units from the Certificate IV in Frontline Management.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Information</i> may include:</p>	<ul style="list-style-type: none"> • archived, filed and historical background data • continuous improvement and quality assurance data • data available internally or externally • data shared and retrieved in various forms such as in writing or verbally, electronically or manually • financial and contractual data • marketing and customer-related data • organisational performance data • planning and organisational documents • policies and procedures
<p><i>Organisational policies</i> may include:</p>	<ul style="list-style-type: none"> • guidelines for decision making throughout the organisation that link the formulation of strategy with its implementation • sets of accepted actions approved by the organisation • Standard Operating Procedures
<p><i>Technology</i> may include:</p>	<ul style="list-style-type: none"> • computerised systems and software such as databases, project management and word processing • telecommunications devices • any other technology used to carry out work roles and responsibilities
<p><i>Designated persons and/or groups</i> may include:</p>	<ul style="list-style-type: none"> • groups designated in workplace policies and procedures • managers or supervisors with management roles and responsibilities concerning information systems • other stakeholders accessing the information system such as customers and service providers • other work groups or teams whose work will be affected by the system

RANGE STATEMENT*Colleagues* may include:

- employees at the same level or more senior managers
- occupational health and safety committee members and other specialists
- people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
- team members

Business plans may include:

- cash flow projections
- long-term budgets/plans
- operational plans
- short-term budgets/plans
- spreadsheet-based financial projections
- targets or key performance indicators for production, productivity, wastage, sales, income and expenditure

Unit Sector(s)

Unit sector

Competency field

Competency field

Management and Leadership - Management

Co-requisite units

Co-requisite units

BSBINM501A Manage an information or knowledge management system

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to organise learning to use an information or knowledge management system and to manage the use of the system.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to managers who have responsibility for seeing that key information and corporate knowledge are retained, accessible to others and improve business outcomes.</p> <p>The unit does not address the requirement to select the technical system (software or hardware), which is seen as the role of an information technology specialist, although in some smaller organisations this may be a part of the manager's role.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Organise learning to use information or knowledge management system	1.1. Identify learning needs of <i>relevant personnel and stakeholders</i> for input into, and use of, <i>an information or knowledge management system</i> 1.2. Identify and secure human, financial and physical resources required for <i>learning activities</i> to use an information or knowledge management system 1.3. Organise and facilitate learning activities 1.4. Promote and support use of the system throughout the organisation 1.5. Monitor and document effectiveness of learning activities
2. Manage use of information or knowledge management system	2.1. Ensure implementation of <i>policies and procedures for the information or knowledge management system</i> are monitored for compliance, effectiveness and efficiency 2.2. Address implementation issues and problems as they arise

ELEMENT	PERFORMANCE CRITERIA
	2.3. Monitor integration and alignment with data and information systems 2.4. Collect information on achievement of <i>performance measures</i> 2.5. Manage contingencies such as system failure or technical difficulties by accessing technical specialist help as required
3. Review use of information or knowledge management system	3.1. Analyse effectiveness of system and report on strengths and limitations of the system 3.2. Review business and operational plan and determine how effectively the system is contributing to intended outcomes 3.3. Make recommendations for improvement to system, policy or work practices

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical and problem-solving skills to ensure the system is working in accordance with organisational expectations and to deal with contingencies
- technology skills to work with and manage the use of the information or knowledge management system.

Required knowledge

- legislation, codes of practice and national standards, for example:
 - privacy and confidentiality legislation
 - freedom of information legislation
 - AS 5037:2005 Knowledge management - A guide
- organisational policies and procedures, for example:
 - records management
 - information management
 - customer service
 - commercial confidentiality
- organisational operations, and existing data and information systems.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> analysis of the strengths and weaknesses of information or knowledge management system/s and evaluation of suitability for a particular work or organisational context knowledge of relevant legislation, codes of practice and national standards.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to system access to system user feedback.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> assessment of written reports reviewing and evaluating information or knowledge management systems direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate observation of presentations oral or written questioning to assess knowledge of relevant organisational policies and procedures review of identified learning needs personnel and stakeholders regarding the information or knowledge management system evaluation of monitoring and documentation about the effectiveness of learning activities analysis documentation reporting on the strengths and limitations of the system review of recommendations made for improvements to the system, policy or work practices.
Guidance information for	Holistic assessment with other units relevant to the

EVIDENCE GUIDE

assessment	<p>industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other units from the Diploma of Management.
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Relevant personnel</i> include:	<ul style="list-style-type: none"> • managers, leaders, supervisors and coordinators • owners • staff, team members and colleagues
<i>Stakeholders</i> include:	<ul style="list-style-type: none"> • clients and customers • employee representatives • funding bodies • industry, professional and trade associations • regulatory bodies and authorities • sponsors • tenderers, suppliers and contractors
<i>Information or knowledge management</i> is defined as:	<ul style="list-style-type: none"> • equipment, strategies, methods, activities and techniques used formally and informally by individuals and the organisation to identify, collect, organise, store, retrieve, analyse, share and draw on information and knowledge valuable to the work of the organisation
<i>An information or knowledge management system:</i>	<ul style="list-style-type: none"> • comprises policies, protocols, procedures and practices to manage information or knowledge within the organisation and among relevant stakeholders
<i>Learning activities</i> include:	<ul style="list-style-type: none"> • coaching and mentoring programs • help desks • information sessions, briefings, workshops and training programs • paper-based or electronic (including intranet)

RANGE STATEMENT	
	<p>learning opportunities</p> <ul style="list-style-type: none"> • use of expert workers such as coaches and mentors to help other personnel use the system
<i>Policies and procedures for the information or knowledge management system</i> cover:	<ul style="list-style-type: none"> • complying with legislative requirements (such as privacy, confidentiality and defamation requirements) and other policies and procedures • content guidelines • ensuring accuracy and relevance of knowledge input into the system • mechanisms, formats and styles of input to system, including appropriate alternative formats for people with a disability • permissions for input • removing out-of-date, inaccurate and content that is no longer relevant • selecting, maintaining and disposing of knowledge in the system • sharing knowledge in the system
<i>Performance measures</i> include:	<ul style="list-style-type: none"> • key performance indicators • other systems and measures to enable assessment of how, when, where and why outcomes are being achieved • performance objectives • performance standards (including codes of conduct) • qualitative or quantitative mechanisms to measure individual performance

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBINN201A Contribute to workplace innovation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to make a pro active and positive contribution to workplace innovation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in any industry or community context, in both small and large organisations. They take a pro active approach to identifying, suggesting and developing ideas about better ways of doing things at a practical operational level in a specific area of activity. While the individual's overall work is undertaken with some supervision and guidance, the nature of this process requires the application of discretion, judgement and effective interpersonal skills.</p> <p>The unit assumes that there is wider organisational and management support for innovation and for individuals at all levels to contribute to the innovation process.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify opportunities to do things better	1.1. Be aware of <i>own role</i> in workplace innovation 1.2. Pro-actively identify <i>opportunities for improvement</i> in own area of work 1.3. Gather and review <i>information which may be relevant to ideas</i> and which might assist in gaining support for ideas
2. Discuss and develop ideas with others	2.1. Identify <i>people who could provide input</i> into ideas for improvements 2.2. Select the <i>best way of approaching people</i> to begin sharing ideas 2.3. Seek <i>feedback</i> on improvement of ideas, and discuss and develop <i>options and possible variations</i> 2.4. Review and select ideas for follow-up based on feedback and further review
3. Address the	3.1. Take action to implement <i>routine changes</i> in

ELEMENT	PERFORMANCE CRITERIA
practicalities of change	consultation with others and within scope of own responsibility 3.2. Identify and articulate <i>issues and practical processes</i> for implementing proposed ideas 3.3. Present ideas and practical suggestions to the appropriate people about how improvements could be made

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to liaise with other team members, to discuss a range of ideas and to be open to different opinions
- comprehension skills to review and interpret information from a wide range of sources
- organisational skills to articulate practical processes and actions for change
- problem-solving skills to identify and anticipate problems at a practical operational level and to develop possible solutions.

Required knowledge

- role and impact of innovation in the workplace at a practical operational level and the 'bigger picture' for innovation in the relevant work or community context
- role of individuals in suggesting and making improvements and the importance of pro-active involvement
- positive impacts and the challenges of change and innovation
- types of changes that can occur as a result of effective individual participation
- typical reasons why suggested improvements or innovations may not be implemented, including operational and management constraints
- ways in which improvements and change can be suggested to maximise likelihood of support.

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • generation of practical ideas in response to a specific workplace situation • effective and open interaction with others to discuss and develop ideas • knowledge and understanding of the role of individuals in contributing to workplace innovation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • interaction with others to reflect the collaborative nature of the improvement/innovation process.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • direct observation of the candidate participating in brainstorming, discussions and other collaborative activities to develop ideas • evaluation of candidate's ability to generate ideas to address a range of practical operational situations • evaluation of feedback from other people involved in the collaborative process about the candidate's communication approaches and abilities • oral or written questioning to assess knowledge of the role of innovation, the role of individuals in the innovation process and the types of techniques that can be used.
Guidance information for assessment	Innovation does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is highly recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Own role</i> may relate to:</p>	<ul style="list-style-type: none"> • current organisational practice in relation to new ideas • knowledge of ways to suggest new ideas • scope of individual discretion and freedom in relation to new ideas • who needs to be involved in the process
<p><i>Opportunities for improvement</i> may relate to:</p>	<ul style="list-style-type: none"> • changes in the physical work environment • different storage or maintenance procedures • different ways of communicating within the team • introduction of new technology • job role changes • new customer base • new work practices or services • staffing changes • work processes and procedures
<p><i>Information which may be relevant to ideas</i> may include:</p>	<ul style="list-style-type: none"> • examples of similar approaches in other contexts or organisations • media articles about similar ideas • notes about how the idea could improve efficiency or service levels • pricing information
<p><i>People who could provide input</i> may include those who might:</p>	<ul style="list-style-type: none"> • challenge and test the ideas • have supervisory or management responsibility • promote the ideas to others • provide technical knowledge • resource the ideas going forward • review any budgetary implications • work in the same area
<p><i>Best way of approaching people</i> may be influenced by:</p>	<ul style="list-style-type: none"> • degree of formality required • location of people (e.g. may not be on-site) • need for any supporting documentation

RANGE STATEMENT	
	<ul style="list-style-type: none"> • time pressures and priorities
<i>Feedback</i> could be gained in a range of ways and may include:	<ul style="list-style-type: none"> • asking questions • talking to colleagues or supervisors • using brainstorming techniques • using 'what if' scenarios
<i>Options and possible variations</i> development may occur by:	<ul style="list-style-type: none"> • considering resources needed • considering time required • taking on board ideas from other people • thinking through all aspects of the ideas • whole new concepts that come out of discussions
<i>Routine changes</i> may include:	<ul style="list-style-type: none"> • adjustments to work practices with minimal impact on others or within a small team • changes that do not require management approvals • changes that have the support of management and for which authority is given for immediate action to be taken
<i>Issues and practical processes</i> may relate to:	<ul style="list-style-type: none"> • any approvals required • cost of implementation • internal politics • need for a planned communication approach (internal or external) • personalities and philosophies of others in the workplace • relationship of the idea to organisation priorities

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Innovation
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Co-requisite units

Co-requisite units		

BSBINN501A Establish systems that support innovation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to conceptualise and establish new systems that support and encourage innovation in the workplace.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit may apply to individuals working in any community or industry context, in small or large organisations. While managers are often responsible for the development of new systems, depending on the organisation size and the nature of the system being developed, senior operational personnel or internal/external specialists may also undertake this role.</p> <p>Systems are varied in nature and might apply to human resources management, team management, organisational structures, product development, information technology, marketing or training and assessment. The critical focus is on systems conceived and developed with innovation as the key driver.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research context for new system development	1.1. Explore and analyse the <i>impact</i> of <i>systems</i> in the overall context of innovation 1.2. Explore and gain clarity around <i>system objectives</i> , particularly in relation to innovation 1.3. Analyse current organisational systems to identify <i>gaps or barriers</i> to innovation 1.4. Research and analyse current and emerging information about systems in <i>other organisations and contexts</i> 1.5. Evaluate the <i>resources and other commitment</i> required to foster innovation 1.6. Identify <i>key stakeholders</i> who can play a role in conceptualising or supporting new system ideas
2. Generate system	2.1. Create system concepts that will foster innovation

ELEMENT	PERFORMANCE CRITERIA
concepts and options	<p>using <i>individual and group techniques</i></p> <p>2.2. Evaluate and discuss a range of ideas with relevant stakeholders</p> <p>2.3. Clearly articulate the ways in which innovation is better supported by system ideas and options</p> <p>2.4. Clearly articulate how the system itself is innovative</p> <p>2.5. Expose ideas and options to <i>ongoing testing, exploration and challenge</i></p> <p>2.6. Select and refine system ideas that meet the workplace requirements and which are both feasible and innovative</p>
3. Develop a plan for the system	<p>3.1. Determine the need for <i>specialised assistance</i> and integrate into system planning</p> <p>3.2. Analyse the potential impact of the new system on people, resources and other organisational practices</p> <p>3.3. Consult with all stakeholders who will be involved with, or affected by, the new system</p> <p>3.4. Develop an operational plan for the system, with budget, time lines and responsibilities</p> <p>3.5. Develop a communication strategy to support the introduction of the new system</p> <p>3.6. Evaluate the coaching and training needs of those who will use the system and plan a learning and development strategy</p>
4. Trial the system	<p>4.1. Present and consult on system proposals with relevant stakeholders</p> <p>4.2. Analyse and integrate feedback into the system development process</p> <p>4.3. Determine appropriate context and parameters for the trialling process</p> <p>4.4. Initiate the trial, taking account of all required consultative, coaching and technical issues</p> <p>4.5. Monitor and review the trial in relation to its goals for fostering innovation</p> <p>4.6. Open the improvement process to ongoing collaborative input and challenge</p> <p>4.7. Adjust system to reflect evaluation feedback</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to conduct potentially complex and challenging negotiations and consultations on new systems development and implementation
- creative thinking skills to explore and generate innovative concepts
- learning skills to stretch boundaries of own knowledge and skills, and to foster similar approaches in others
- literacy skills to analyse and develop potentially complex organisational requirements and documentation for work systems
- numeracy skills to develop and interpret financial estimates
- planning and organisational skills to plan the implementation of new systems and to organise and implement training and learning activities
- research skills to investigate the broader context for system development
- self-management skills to take responsibility for driving system development with a focus on innovation

Required knowledge

- concepts and theories of change management, including ways of introducing change in different organisational contexts and change management communication strategies
- concepts and theories of innovation and how these link to innovation in practice
- in-depth understanding of the ways in which workplace systems can contribute to innovation in the workplace
- project planning and management techniques
- technical context in which the system is being developed
- typical ways in which systems may present barriers to innovation

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and

Evidence of the following is essential:

EVIDENCE GUIDE	
evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • designing, trialling and reviewing more than one work system that is planned and structured to maximise opportunities for innovation by workers and managers in the workplace • clearly articulating and understanding how and why the work system fosters workplace innovation among workers and managers • knowledge of concepts and theories of innovation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • interaction with others to reflect the collaborative nature of systems development and of innovation more broadly • use of current industry technology in the development of systems.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of systems developed by the candidate for a particular workplace context, with a focus on innovation (both in terms of process and outcome) • oral or written questioning to assess knowledge of links between systems and innovation, wider innovation concepts and change management processes • review of analysis of current organisational systems to identify gaps or barriers to innovation • review of operational plan developed for the system • review of communication strategy developed to support the introduction of the new system • evaluation of learning and development strategy for users of the system.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is strongly recommended, for example:</p> <ul style="list-style-type: none"> • BSBHRM506A Manage recruitment, selection and induction processes • BSBINM601A Manage knowledge and information • BSBINN601B Manage organisational change

EVIDENCE GUIDE

- BSBLED705A Plan and implement a mentoring program.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Impact of systems may be positive or negative and relate to:

- administrative processes
- degree of freedom or restriction for individuals, workers and teams
- extent of collaboration and cooperation within the organisation
- operational procedures
- quality of communication channels and processes
- quality of the physical environment
- responsiveness of the organisation to customer needs.

Systems might relate to:

- human resources
- innovation reward systems
- learning and development systems
- product or service review processes
- project management
- quality management
- team management.

System objectives may include:

- addressing operational or service problems
- changing the culture of the organisation
- developing workforce skills
- diversifying the business
- enhancing customer service quality
- generating more income
- improving competitiveness
- reducing operating costs

RANGE STATEMENT	
	<ul style="list-style-type: none"> • winning more projects.
<i>Gaps or barriers</i> might relate to:	<ul style="list-style-type: none"> • differences between management rhetoric and reality • hierarchical system of management • inadequate reporting or recording • managers who do not accept new ideas • overly bureaucratic processes • people not communicating with each other or sharing information • staff not being involved in decisions • teams who work in rigid and inflexible ways.
<i>Other organisations and contexts</i> may be:	<ul style="list-style-type: none"> • competitor organisations • local, national or international • organisations of similar size or structure • totally different organisations who have developed interesting or successful systems • wider community or business contexts in which innovation occurs.
<i>Resources and other commitment</i> may include:	<ul style="list-style-type: none"> • financial • human • management commitment • physical • preparedness to change at all levels of the organisation.
<i>Key stakeholders</i> may include:	<ul style="list-style-type: none"> • boards or committees • customers • government departments or other statutory authorities • management • specialist advisors • work colleagues.
<i>Individual and group techniques</i> may include:	<ul style="list-style-type: none"> • brainstorming • cost-benefit analysis • flow charts • jotting down words • mind maps • process analysis • review of approaches/procedures used by competitors • strengths, weaknesses, opportunities and

RANGE STATEMENT	
	threats (SWOT) analysis <ul style="list-style-type: none"> • value analysis • visual imagining • other creative thinking strategies.
<i>Ongoing testing, exploration and challenge</i> may include:	<ul style="list-style-type: none"> • comparing • contrasting • gaining input from those who do not support the concept • playing 'devil's advocate' • seeking objective internal or external review.
<i>Specialised assistance</i> may include:	<ul style="list-style-type: none"> • external consultants or advisers • internal colleagues with specialist or technical knowledge relevant to the system.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Innovation
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Co-requisite units

Co-requisite units	

BSBINN502A Build and sustain an innovative work environment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to create an environment that enables and supports the application of innovative practice.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in leadership or management roles in any industry or community context. The individual could be employed by the organisation, but may also be an external contractor, the leader of a cross organisation team or of a self formed team of individuals. The work group could be permanent or temporary in nature.</p> <p>The unit focuses on the skills and knowledge required to develop and implement a holistic approach to the integration of innovation across all areas of work practice. It also acknowledges the importance of wider contextual evaluation for potential innovations to ensure their value and benefit.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Lead innovation by example	1.1. Make innovation an integral part of <i>leadership and management activities</i> 1.2. Demonstrate positive reception of ideas from others and provide constructive advice 1.3. Establish and maintain relationships based on mutual respect and trust 1.4. Take considered <i>risks</i> to open up opportunities for innovation 1.5. Regularly evaluate own approaches for consistency with the wider organisational or project context
2. Establish work practices that support innovation	2.1. Consult on and establish <i>working conditions</i> that reflect and encourage innovative practice 2.2. Introduce and maintain <i>workplace procedures</i> that foster innovation and allow for rigorous <i>evaluation of innovative ideas</i> 2.3. Facilitate and participate in <i>collaborative work arrangements</i> to foster innovation

ELEMENT	PERFORMANCE CRITERIA
	2.4. Build and lead teams to work in <i>ways that maximise opportunities for innovation</i>
3. Promote innovation	3.1. Acknowledge suggestions, improvements and innovations from all colleagues 3.2. Find appropriate <i>ways of celebrating and promoting innovation</i> 3.3. Promote and reinforce the value of innovation according to the vision and objectives of the organisation or project 3.4. Promote and support the evaluation of innovative ideas within the wider organisational or project context
4. Create a physical environment which supports innovation	4.1. Evaluate the <i>impact of the physical environment</i> in relation to innovation 4.2. Collaborate with colleagues about ideas for enhancing the physical work environment before taking action 4.3. Consider potential for supporting innovation when selecting physical resources and equipment 4.4. Design, fit-out and decorate workspaces to encourage creative mindsets, collaborative working and the development of positive workplace relationships
5. Provide learning opportunities	5.1. Pro-actively share relevant information, knowledge and skills with colleagues 5.2. Provide or encourage <i>formal and informal learning opportunities</i> to help develop the skills needed for innovation 5.3. Create opportunities in which individuals can learn from the experience of others

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, consultation and negotiation skills to model and lead, open and collaborative relationships

REQUIRED SKILLS AND KNOWLEDGE

- comprehension skills to interpret and develop information that may deal with complex ideas and relate to issues both within and outside a given workplace context
- planning and organisational skills to implement wide-ranging practical processes and procedures that support innovation
- problem-solving skills to assess and respond to challenges and risks around innovation at an operational management level
- self-management and learning skills to evaluate and enhance personal effectiveness, and to promote a culture of ongoing learning and development.

Required knowledge

- benefits of providing coaching and learning opportunities in relation to innovation
- concept of innovation, what it is and what it means for different people either working independently or within an organisation
- context for innovation in the relevant workplace context including core business values, overall objectives, broader environmental context and the need to ensure the value and benefit of innovative ideas and projects
- different ways of rewarding performance
- factors and tools that can motivate individuals to use creative thinking and apply innovative work practices
- legislative framework that impacts on operations in the relevant workplace context
- management principles and leadership styles, including the impact of different approaches on innovation
- typical challenges and barriers to innovation within teams and organisations, and ways of overcoming these
- ways in which workplace climate can affect individual attitudes and performance.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- establishment of procedures and practices (for a project or a workplace) which support and foster innovative work practice and include sound

EVIDENCE GUIDE	
	<p>evaluation processes</p> <ul style="list-style-type: none"> • modelling of behaviour that supports innovative work practice • knowledge and understanding of the role of leaders and managers in encouraging innovation, and the issues and challenges associated with building and sustaining an innovative work environment.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • involvement of a team for which the candidate provides leadership and guidance.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of outcomes and processes from activities managed by the candidate, particularly in relation to how innovation and innovative practice was encouraged and supported • oral or written questioning to assess knowledge of ways that innovation can be fostered and the typical challenges and barriers to innovation.
Guidance information for assessment	<p>Innovation does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is highly recommended.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Leadership and management activities</i> may include:</p>	<ul style="list-style-type: none"> • people management practices • planning processes

RANGE STATEMENT	
	<ul style="list-style-type: none"> • regular management meetings • review processes
Risks may include:	<ul style="list-style-type: none"> • budgetary issues • challenging changes in relationships, work practices and general workplace climate • unforeseen impacts of innovative ideas
Working conditions may include:	<ul style="list-style-type: none"> • family-friendly leave entitlements • flexible working hours • social leave • study leave • time provided for coming up with ideas
Workplace procedures may relate to:	<ul style="list-style-type: none"> • briefing processes • client relations • performance management • project management • staff meetings • training
Evaluation of innovative ideas may relate to:	<ul style="list-style-type: none"> • analysing consistency with overall goals, values or vision • assessing resource requirements and practicalities • assessing the potential to find 'champions' or supporters • evaluating the external factors that may impact on the idea • exploring the implications of ideas that may stretch or change existing ways of doing things
Collaborative work arrangements might be:	<ul style="list-style-type: none"> • cross section • vertical teams • within a section • working with supplier organisations or partner organisations
Ways that maximise opportunities for innovation may relate to:	<ul style="list-style-type: none"> • collaborating • collecting data • creative thinking • future scanning • getting feedback • making suggestions • networking
Ways of celebrating and	<ul style="list-style-type: none"> • congratulating the project team

RANGE STATEMENT	
<i>promoting innovation</i> may include:	<ul style="list-style-type: none"> • ensuring management acknowledgment • providing a newsletter story about the idea • using the idea to help foster other ideas • well-planned group incentive schemes
<i>Impact of the physical environment</i> may relate to:	<ul style="list-style-type: none"> • eating areas • extent to which design or style links with declared philosophies or objectives • external areas • general ambience of the work environment • location of different people • presence and ambience of relaxation areas • style of décor • use of creative messages or images in the workplace • workspace design and décor • workstation arrangements and opportunities for interaction
<i>Formal and informal learning opportunities</i> may include:	<ul style="list-style-type: none"> • coaching • conferences • formal training courses/programs • information seminars • job rotation • mentoring • online learning

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Innovation
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Co-requisite units

Co-requisite units		

BSBINN601B Manage organisational change

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to determine strategic change requirements and opportunities; and to develop, implement and evaluate change management strategies.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to managers with responsibilities that extend across the organisation or across significant parts of a large organisation. They may have a dedicated role in human resources management, human resources development, or work in a strategic policy or planning area. The unit takes a structured approach to change management and applies to people with considerable work experience and organisational knowledge.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify change requirements and opportunities	<p>1.1. Identify <i>strategic change needs</i> through an analysis of organisational objectives</p> <p>1.2. Review existing policies and practices against strategic objectives to identify change requirements</p> <p>1.3. Monitor trends in the <i>external environment</i> to identify events or trends that impact on the achievement of organisation's objectives</p> <p>1.4. Identify major operational change requirements due to performance gaps, business opportunities or threats, or management decisions</p> <p>1.5. Review and prioritise change requirements or opportunities with <i>relevant managers</i></p> <p>1.6. Consult specialists and experts to assist in the identification of major change requirements and opportunities</p>
2. Develop change management strategy	<p>2.1. Undertake cost-benefit analysis for high priority change requirements and opportunities</p> <p>2.2. Undertake risk analysis, identify <i>barriers to change</i>, and agree and record mitigation strategies</p> <p>2.3. Develop change management project plan</p> <p>2.4. Obtain approvals from relevant authorities to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>confirm the change management process</p> <p>2.5. Assign <i>resources</i> to the project and agree reporting protocols with relevant managers</p>
3. Implement change management strategy	<p>3.1. In consultation with relevant groups and individuals, develop communication or education plan to promote the benefits of the change to the organisation and to minimise loss</p> <p>3.2. Arrange and manage activities to deliver the communication or education plans to relevant groups and individuals</p> <p>3.3. Consult with relevant groups and individuals for input into the change process</p> <p>3.4. Identify and respond to barriers to the change according to risk management plans</p> <p>3.5. Action <i>interventions and activities</i> set out in project plan according to project timetable</p> <p>3.6. Activate strategies for embedding the change</p> <p>3.7. Conduct regular evaluation and review, and modify project plan where appropriate to achieve change program objectives</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- high level interpersonal and leadership skills to obtain acceptance of change processes and to inspire trust
- innovation skills to think laterally and to develop creative means to enable people to accept change positively
- learning skills to enable openness to new ideas and techniques which could contribute to ongoing organisational improvement
- planning and organising skills to sequence events and to enable staff to be clear in times of change or turbulence
- problem-solving skills to identify and respond to barriers to the change and analyse risks
- project management skills to implement the change management strategy
- teamwork skills to consult with relevant groups and individuals for input to the

REQUIRED SKILLS AND KNOWLEDGE
change process <ul style="list-style-type: none"> • verbal communication skills to consult with relevant stakeholders and promote the change management plan
Required knowledge
<ul style="list-style-type: none"> • change management process or cycle • components of a change management project plan • impact of the external environment on change strategies • organisational behaviour • potential barriers to change • range of strategies for embedding change

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • development of a change process that details rationale for the change and its objectives • implementation of a change process • critical evaluation of how the change process was managed • demonstration of techniques for responding to resistance to change.
Context of and specific resources for assessment	Assessment must ensure access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>The following assessment methods are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios around change management • assessment of reports on change management • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate • review of change management project plan and communication

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> or education plans • review of records outlining consultation with relevant groups and individuals for input to the change process • oral or written questioning to assess knowledge of change management strategies.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Strategic change needs</i> may include:	<ul style="list-style-type: none"> • actions arising from strategic planning activities to bring about major change in the organisation, which may relate to: <ul style="list-style-type: none"> • people • processes • technology • structure.
<i>External environment</i> may refer to factors that are:	<ul style="list-style-type: none"> • consumer-driven • ecological • economic • ethical • global • legal • political • social • technological • the drive to corporate sustainability • the move to a knowledge economy • workforce-driven.
<i>Relevant managers</i> may	<ul style="list-style-type: none"> • affected by the change

RANGE STATEMENT	
include those:	<ul style="list-style-type: none"> • holding a leadership position in the organisation • participating in the change project.
<i>Barriers to change</i> may include:	<ul style="list-style-type: none"> • challenges to group norms or established roles • existing organisational culture • existing reward systems • fear of loss of status, security, power or friends • interdepartmental rivalry or conflict • lack of involvement in the change • low morale • vested interests.
<i>Resources</i> may include:	<ul style="list-style-type: none"> • contractors • employees and managers • external and internal consultants • financial and budget allocation • hardware and software • physical assets.
<i>Interventions and activities</i> may include:	<ul style="list-style-type: none"> • action research • career planning • job redesign • sensitivity training • succession planning • surveys (with feedback) • team building • termination or redeployment • training • transition analysis.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and innovation - innovation
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Co-requisite units

Co-requisite units		

BSBINN801A Lead innovative thinking and practice

Modification History

Not applicable.

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit describes the performance outcomes, skills and knowledge required to generate, lead and sustain innovative organisational thinking and practice.</p> <p>The unit also covers generating innovative thinking and creativity to lead sustainable innovative practices; supporting a culture of innovation; and maintaining a sustained approach to innovative thinking and practice.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>This unit applies to individuals who initiate and lead innovation in any industry or community context. Each organisation's thinking and practice will be different depending on its core business, purpose, size, complexity and broader operating context.</p> <p>Leaders encourage innovative thinking and practice in relation to drivers shaping the particular work environment. Managers may use innovative thinking and practice to advance learning and business processes that contribute to organisational strategies, business plans and goals.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Generate innovative thinking and creativity	1.1. Research and use a <i>range of techniques and tools</i> to generate new ideas and thinking 1.2. Research and analyse trends shaping organisation's current and future thinking and practice 1.3. Introduce and promote creative thinking techniques to foster personal and team innovation 1.4. Evaluate <i>overall context</i> for individual and collective innovative thinking and creativity 1.5. Research and analyse specific <i>conditions for innovation</i> and issues that impact on individual and collective innovative thinking and creativity 1.6. Research and review innovation <i>drivers</i> and <i>enablers</i>
2. Lead innovative	2.1. Develop personal <i>leadership style</i> to model positive

ELEMENT	PERFORMANCE CRITERIA
practices	<p>innovative thinking and practice</p> <p>2.2. Review, challenge and refine own style and practice in relation to modelling and supporting innovation</p> <p>2.3. Assess and determine the requirements to promote sustainable innovative activity for the operational context and people involved</p> <p>2.4. Devise and implement most appropriate means to promote knowledge transfer</p> <p>2.5. Identify, evaluate and manage <i>risks</i> associated with innovation within an organisation</p>
3. Generate and support a culture of innovation	<p>3.1. Introduce and promote innovative practices, processes, products or services appropriate to audience and organisational requirements</p> <p>3.2. Establish ways to capture, communicate and share innovative ideas and practices</p> <p>3.3. Initiate and foster communication, consultation and team development approaches that support innovation</p> <p>3.4. Identify, assess and provide adequate resources for innovation to occur</p> <p>3.5. Develop and apply strategies to foster a workplace culture capable of encouraging innovation</p> <p>3.6. Establish <i>mechanisms at system and process</i> level that can support innovation</p>
4. Sustain innovative thinking and practice	<p>4.1. Develop strategies to make innovation an integral part of organisational activity</p> <p>4.2. Develop and monitor processes to ensure ongoing awareness of individual and collective contributions to innovative thinking and practice</p> <p>4.3. Analyse potential barriers and risks to innovation and devise strategies to respond</p> <p>4.4. Analyse and reflect on innovation performance as a basis for developing strategies for improvement</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- communication, consultation and negotiation skills to model and lead open and collaborative relationships
- planning and organisational skills to develop, implement and sustain practical strategies for innovation
- problem-solving skills to assess challenges and risks at a strategic level and to develop appropriate responses
- research and analytical skills to work with structurally intricate and conceptually complex innovation texts and broader industry contexts; and to develop materials which deal with complex ideas and concepts
- self-management and learning skills to evaluate and enhance personal effectiveness, and to promote a culture of ongoing learning and development
- team and leadership skills to generate, promote and sustain innovation in an organisational or community setting
- technology skills to use computers for document production and research of innovative practices and theories

Required knowledge

- current and past theories and thinking about innovation and creativity
- leadership styles including the way that different approaches impact on innovation in organisations, and specific approaches that foster innovation
- legislative framework that affects business operations in a given context, including particular legislation with a direct impact on innovation, for example concerning copyright, trademarks, intellectual property, occupational health and safety (OHS)
- management techniques and tools for the encouragement of creative thinking and for turning good ideas and creative thinking into innovation
- organisational and industry context for innovation including overarching mission, objectives and strategies
- relationship between theory and thinking on innovation and creativity, and applied practice
- risk assessment and management strategies in the context of innovation
- social, political, economic and technological developments that determine the broad context for innovation in the relevant workplace context
- theories, processes and practice of organisational transformation and the management of the stages of change
- typical strategic challenges and barriers to innovation within organisations and ways of overcoming these challenges and barriers

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> comprehensive understanding and application of key concepts, current theories and processes for promoting innovative thinking and practices in an organisational context critical examination of trends in thinking and emerging practices as they relate to an organisation's current thinking and practices knowledge of social, political, economic and technological developments that determine the broad context for innovation in the relevant workplace context.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> assessment over a sufficient timeframe to allow holistic assessment of the candidate's capacity to lead and sustain innovative thinking and practice opportunities for interaction with others to reflect the collaborative nature of the innovation process access to current organisational documentation and support materials.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate evaluation of reports prepared by the candidate to propose strategies and techniques for building innovative thinking and practice within a given organisational context oral or written questioning to assess knowledge of innovation theory and practice, context for innovation, and factors that affect innovation in a particular organisation.

EVIDENCE GUIDE**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- BSBINN601B Manage organisational change
- BSBLED701A Lead personal and strategic transformation
- BSBLED702A Lead learning strategy implementation
- PSPMNGT614A Facilitate knowledge management.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Range of techniques and tools for creative thinking may include:

- brainstorming
- concept maps
- creative thinking matrix
- DeBono tools (e.g. six hats)
- foresight tools
- Kirton Adaptation Innovation Inventory
- mindmapping (Buzan)
- nominal group technique
- scenario analysis.

Overall context may include the environment relating to:

- culture
- electronic and non-physical context
- global
- local or regional
- national
- work group or community.

Conditions for innovation may span causal factors and issues relating to:

- ability to gain and respond to customer feedback
- available resources (in all their forms)
- business systems

RANGE STATEMENT	
	<ul style="list-style-type: none"> • changes to workflow and processes • competency, capability and skills of the workforce • culture and values • economic change • emerging technologies • executive support for innovation • external • globalisation • government regulations, policy or funding initiatives • internal • labour market and industry changes and restructures • learning culture • management practices • new business models • new markets • organisational sociocultural circumstances and issues (for example, within Indigenous organisations) • research and development focus and support • shift to knowledge economy or new economy • structure and design of work in the organisation • technology change and convergence • vision, core purpose and capabilities.
<p>Drivers are factors or changes that impel innovative practice and may include:</p>	<ul style="list-style-type: none"> • customer expectations • globalisation • market shifts • new legislation (such as compliance) • policies (such as environmental protection) • price and profitability • technology change.
<p>Enablers are factors that help innovation overcome barriers and may include:</p>	<ul style="list-style-type: none"> • breakthroughs • collaboration • culture • development • intellectual property • inventions • management support

RANGE STATEMENT	
	<ul style="list-style-type: none"> • profitability • research • resources • responsiveness • skilled workforce • technology.
<i>Leadership style</i> will usually be differentiated by five classical approaches:	<ul style="list-style-type: none"> • autocratic (non-participative) • charismatic flexibility • democratic (participative) • laissez faire (free reign) • paternalistic.
<i>Risks</i> may include:	<ul style="list-style-type: none"> • damage to property/equipment • environmental • market changes • OHS (including disease) • product failure • professional incompetence • resource deficiencies • systems and process failures.
<i>Mechanisms at system and process level</i> may be physical or electronic and relate to:	<ul style="list-style-type: none"> • customer management • human resources • information technology • learning • market • OHS • operations • planning (strategic and corporate) • quality • research and development • risk • resource management • supply chain management • structural and performance hierarchies (strata).

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Innovation
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Co-requisite units

Co-requisite units		

BSBITS401B Maintain business technology

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i>.</p> <p>Revised unit. Required skills updated to focus on learning and development practices and compliance with policy and procedures.</p> <p>Replaces BSBITS401A Maintain business technology</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to maintain the effectiveness of business technology in the workplace. It includes maintaining existing technology and planning for future technology requirements.

Application of the Unit

This unit applies to individuals with a broad knowledge of business technology who contribute well developed skills in creating solutions to maintenance and upgrade issues with existing technology. They may have responsibility to provide guidance or to delegate aspects of these tasks to others.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Maintain performance of hardware and software	<p>1.1 Monitor and evaluate system effectiveness to ensure it meets <i>organisational and system requirements</i></p> <p>1.2 Use operating system, drive and disk structure, reports and files to identify performance problems</p> <p>1.3 <i>Maintain disk drives and peripherals</i> according to manufacturers' and organisational requirements</p> <p>1.4 Replace <i>consumables</i> in accordance with manufacturers' and organisational requirements</p>
2. Provide basic system administration	<p>2.1 Carry out system back-up procedure at regular intervals according to organisational and system requirements</p> <p>2.2 Install and operate <i>software</i> applications in accordance with developers' and organisational requirements</p> <p>2.3 Maintain and update security access procedures in line with organisational requirements</p> <p>2.4 Ensure that licence for use of software is used, checked and recorded in accordance with organisational requirements</p> <p>2.5 Regularly maintain and update virus programs in accordance with organisational requirements</p>
3. Identify future technology requirements	<p>3.1 Maintain knowledge of current and new <i>technology</i> by regularly accessing <i>sources of information</i></p> <p>3.2 Identify and develop <i>improved technology systems</i> using feedback from clients and colleagues</p> <p>3.3 Assess existing technology against newly available technology to determine future needs and priorities</p> <p>3.4 Identify and select new technologies to achieve and maintain continuous organisational development</p> <p>3.5 Obtain management and budget approval for new selected</p>

	technologies
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Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to explain the operation and troubleshooting of technology in the work environment
- literacy skills to interpret and evaluate the purposes and objectives of various uses of technology; to display logical organisation of written information
- problem-solving skills to address routine and non-routine faults with hardware and software
- research and analytical skills to analyse and identify organisation's future technology requirements.

Required knowledge

- costs and benefits of technology maintenance strategies
- general features and capabilities of current industry accepted hardware and software products
- principles of environmental sustainable practice in implementing business technology
- importance of back-up and security procedures; maintenance and diagnostic procedures; licensing, installation and purchasing procedures
- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - environmental issues
 - occupational health and safety (OHS).

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
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Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the following is essential: <ul style="list-style-type: none"> installing software and hardware organising and accessing software, materials and consumables maintaining technology security and maintenance systems knowledge of costs and benefits of technology maintenance strategies.
Context of and specific resources for assessment	Assessment must ensure: <ul style="list-style-type: none"> access to an actual workplace or simulated environment access to office equipment and resources access to examples of technology maintenance and security procedures.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate analysis of responses to case studies and scenarios demonstration of techniques oral or written questioning to assess knowledge of general features and capabilities of current industry accepted hardware and software products.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: <ul style="list-style-type: none"> other information and communications technology or general administration units.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Organisational and system requirements</i> may include:</p>	<ul style="list-style-type: none"> • back-up procedures • Code of Conduct • ethical standards • legal and organisational policy/guidelines and requirements • maintenance of customised software • OHS policies, procedures and programs • quality assurance and/or procedures manuals • register of licenses • restore procedures • security and confidentiality procedures • software licence documentation • storage of information technology documentation • storage retrieval and type of product licenses • updating of virus protection systems.
<p><i>Disk drive and peripherals maintenance</i> may include:</p>	<ul style="list-style-type: none"> • backing up files before major maintenance • checking hard drive for errors • cleaning dust from internal and external surfaces • creating more free space on the hard disk • defragmenting the hard disk • deleting unwanted files • reviewing programs • using up-to-date anti-virus programs.
<p><i>Consumables</i> may include:</p>	<ul style="list-style-type: none"> • disks • magnetic tape and cassettes • print heads • print media • printer ribbons and cartridges.
<p><i>Software</i> may include:</p>	<ul style="list-style-type: none"> • accounting applications • commercial software applications • database applications • internet/intranet/extranet related programs • organisation-specific software • presentation applications • spreadsheet applications • word processing applications.
<p><i>Technology</i> may include:</p>	<ul style="list-style-type: none"> • client services • computers • data transfer devices • modems • peripherals, including:

	<ul style="list-style-type: none"> • printers, scanners, tape cartridges • speakers, multimedia kits • personal computer, modems • input equipment such as mouse, touch pad, keyboard, pens • mobile phones, palmtops and personal digital assistants (PDAs), laptops and desktop computers • Bluetooth devices, universal serial bus (USB), Firewire (IEEE 1394) • photocopiers • printers • scanners • software.
Sources of information may include:	<ul style="list-style-type: none"> • computer hardware manufacturers • computer magazines and journals • computer software designers • industry associations • internal/external clients • internet • retail outlets • seminars, workshops and training sessions • trade fairs.
Improved technology systems may include:	<ul style="list-style-type: none"> • access protocols • cable data transmissions • delivery and installation systems • hardware upgrades • implementing a new system • maintenance options • multimedia • networking options • new hardware • new software • resource usage monitoring • software upgrades • environmentally sustainable design practices.

Unit Sector(s)

Information and Communications Technology – IT Support

Custom Content Section

Not applicable.

BSBITU201A Produce simple word processed documents

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to correctly operate word processing applications in the production of workplace documents.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who perform a range of routine tasks in the workplace, using a limited range of practical skills and fundamental knowledge of word processing and software in a defined context, under direct supervision or with limited individual responsibility.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to produce documents	<p>1.1. Use safe work practices to ensure <i>ergonomic, work organisation, energy and resource conservation requirements</i> are addressed</p> <p>1.2. Identify <i>document</i> purpose, audience and presentation requirements, and clarify with relevant personnel as required</p> <p>1.3. Identify <i>organisational</i> and task <i>requirements</i> for document layout and design</p>
2. Produce documents	<p>2.1. <i>Format</i> document using appropriate <i>software functions</i> to adjust page layout to meet information requirements, in accordance with organisational style and presentation requirements</p> <p>2.2. Use system features to identify and manipulate <i>screen display options and controls</i></p> <p>2.3. Use manuals, user documentation and online help to overcome problems with document presentation and production</p>
3. Finalise documents	<p>3.1. Ensure final document is previewed, <i>checked</i>, adjusted and <i>printed</i> in accordance with organisational and task requirements</p> <p>3.2. Ensure document is prepared within <i>designated time lines</i> and organisational requirements</p> <p>3.3. <i>Name and store document</i> in accordance with organisational requirements and exit application</p>

ELEMENT	PERFORMANCE CRITERIA
	without information loss/damage

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to clarify document requirements
- editing and proofreading skills to check own work for accuracy
- keyboarding skills to enter text and numerical data
- literacy skills to read and understand organisation's procedures, and to use basic models to produce a range of correspondence
- problem-solving skills to solve routine problems.

Required knowledge

- formatting styles and their effect on formatting, readability and appearance of documents
- purpose, use and function of word processing software
- organisational requirements for ergonomics, work periods and breaks, and conservation techniques
- organisational style guide.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- knowledge of simple word processing functions, standard document layout and design principles
- production of a minimum of three simple, word processed documents.

EVIDENCE GUIDE	
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • access to examples of word processed documents and style guides.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of formatted document • review of final document • demonstration of techniques • oral or written questioning to assess knowledge of word processing software functions.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • general administration units • other IT use units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Ergonomic requirements</i> may include:</p>	<ul style="list-style-type: none"> • avoiding radiation from computer screens • chair height, seat and back adjustment • document holder • footrest • keyboard and mouse position

RANGE STATEMENT	
	<ul style="list-style-type: none"> • lighting • noise minimisation • posture • screen position • workstation height and layout
<i>Work organisation requirements</i> may include:	<ul style="list-style-type: none"> • exercise breaks • mix of repetitive and other activities • rest periods
<i>Conservation requirements</i> may include:	<ul style="list-style-type: none"> • disposing of non-confidential waste paper in recycling bins • double-sided paper use • re-using paper for rough drafts (observing confidentiality requirements) • utilising power-save options for equipment
<i>Documents</i> may include:	<ul style="list-style-type: none"> • agendas • briefing papers • envelopes • faxes • labels • letters • mail merges • memos • minutes • short reports • simple one-page flyers • standard form letters
<i>Organisational requirements</i> may include:	<ul style="list-style-type: none"> • company colour scheme • company logo • consistent corporate image • content restrictions • established guidelines and procedures for document production • house styles • observing copyright legislation • organisation name, time, date, document title, filename etc. in header/footer • templates
<i>Formatting</i> may include:	<ul style="list-style-type: none"> • alignment on page • columns • company logo/letterhead

RANGE STATEMENT	
	<ul style="list-style-type: none"> • enhancements to format - borders, patterns and colours • enhancements to text - colour, size, orientation • headers/footers • margins • page orientation
<i>Software functions</i> may include:	<ul style="list-style-type: none"> • default settings • document protection • grammar check • headers/footers • indent • line spacing • page numbers • page set up • paragraph formatting • spell check • tabs • text formatting
<i>Screen display options and controls</i> may include:	<ul style="list-style-type: none"> • layout view • maximise/minimise • normal view • page view • print preview • ruler • toolbars • zoom percentage
<i>Checking</i> may include:	<ul style="list-style-type: none"> • accuracy of information • consistency of layout • ensuring instructions with regard to content and format have been followed • grammar • proofreading • spelling, electronically and manually
<i>Printing</i> may include:	<ul style="list-style-type: none"> • basic print settings • multiple copies • odd or even pages • print preview • printer setup • specified pages • whole document

RANGE STATEMENT	
<i>Designated time lines</i> may include:	<ul style="list-style-type: none"> • organisational time line e.g. deadline requirements • time line agreed with internal/external client • time line agreed with supervisor/person requiring document/s
<i>Naming and storing documents</i> may include:	<ul style="list-style-type: none"> • appropriate file type • authorised access • file names according to organisational procedure e.g. numbers rather than names • file names which are easily identifiable in relation to the content • file/directory names which identify the operator, author, section, date etc. • filing locations • organisational policy for backing up files • organisational policy for filing hard copies of documents • security • storage in folders/sub-folders • storage on hard/floppy disk drives, CD-ROM, tape back-up

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Information and Communications Technology - IT Use
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Co-requisite units

Co-requisite units	

Co-requisite units		

BSBITU306A Design and produce business documents

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to design and produce various business documents and publications. It includes selecting and using a range of functions on a variety of computer applications.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who possess fundamental skills in computer operations and keyboarding. They may exercise discretion and judgement using appropriate theoretical knowledge of document design and production to provide technical advice and support to a team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and prepare resources	1.1. Select and use appropriate <i>technology</i> and <i>software</i> applications to produce required <i>business documents</i> 1.2. Select layout and style of publication according to information and <i>organisational requirements</i> 1.3. Ensure document design is consistent with company and/or client requirements, using basic design principles 1.4. Discuss and clarify format and style with person requesting document/publication
2. Design document	2.1. Identify, open and generate files and records according to task and organisational requirements 2.2. Design document to ensure efficient entry of information and to maximise the presentation and appearance of information 2.3. Use a range of <i>functions</i> to ensure consistency of design and layout 2.4. Operate <i>input devices</i> within designated requirements
3. Produce document	3.1. Complete document production within designated time lines according to organisational requirements 3.2. Check document produced to ensure it meets task requirements for style and layout 3.3. Store document appropriately and save document to

ELEMENT	PERFORMANCE CRITERIA
	avoid loss of data 3.4. Use manuals, training booklets and/or help-desks to overcome basic difficulties with document design and production
4. Finalise document	4.1. Proofread document for readability, accuracy and consistency in language, style and layout prior to final output 4.2. Make any modifications to document to meet requirements 4.3. <i>Name</i> and <i>store</i> document in accordance with organisational requirements and exit the application without data/loss damage 4.4. Print and present document according to requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- keyboarding and computer skills to complete a range of formatting and layout tasks
- literacy skills to read and understand a variety of texts; to prepare general information and papers according to target audience; and to edit and proofread documents to ensure clarity of meaning and conformity to organisational requirements
- numeracy skills to access and retrieve data
- problem-solving skills to determine document design and production processes.

Required knowledge

- appropriate technology for production requirements
- functions and features of contemporary computer applications
- organisational policies, plans and procedures
- organisational requirements for document design e.g. style guide.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> designing and producing a minimum of 3 completed business documents, using at least 2 software applications in the production of each document using appropriate data storage options knowledge of the functions and features of contemporary computer applications.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to an actual workplace or simulated environment access to office equipment and resources access to examples of style guides and organisational procedures.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate review of final printed documents demonstration of techniques observation of presentations oral or written questioning to assess knowledge of software applications.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> general administration units other IT use units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Technology may include:

- computers
- photocopiers
- printers
- scanners

Software may include:

- accounting packages
- database packages
- presentation packages
- spreadsheet packages
- word processing packages

Business documents may include:

- accounts statements
- client databases
- newsletters
- project reviews
- proposals
- reports
- web pages

Organisational requirements may include:

- budgets
- correctly identifying and opening files
- legal and organisational policies, guidelines and requirements
- locating data
- log-on procedures
- manufacturers' guidelines
- occupational health and safety policies, procedures and programs
- quality assurance and/or procedures manuals
- saving and closing files
- security
- storing data

Functions may include:

- alternating headers and footers
- editing
- merging documents

RANGE STATEMENT	
	<ul style="list-style-type: none"> • spell checking • table formatting • using columns • using styles
<i>Input devices</i> may include:	<ul style="list-style-type: none"> • keyboard • mouse • numerical key pad • scanner
<i>Naming</i> documents may include:	<ul style="list-style-type: none"> • appropriate file type • authorised access • file names according to organisational procedure e.g. numbers rather than names • file names which are easily identifiable in relation to the content • file/directory names which identify the operator, author, section, date etc. • filing locations • organisational policy for backing up files • organisational policy for filing hard copies of documents • security
<i>Storing</i> documents may include:	<ul style="list-style-type: none"> • storage in directories and sub-directories • storage on CD-ROMs, disk drives or back-up systems • storing/filing hard copies of computer generated documents • storing/filing hard copies of incoming and outgoing facsimiles • storing/filing incoming and outgoing correspondence

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Information and Communications Technology - IT Use
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Co-requisite units

Co-requisite units	

BSBLED401A Develop teams and individuals

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to determine individual and team development needs and to facilitate the development of the workgroup.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals with a broad knowledge of learning and development who apply their skills in addressing development needs to meet team objectives. They may have responsibility to provide guidance or to delegate aspects of tasks to others.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine development needs	<p>1.1. Systematically identify and implement <i>learning and development needs</i> in line with <i>organisational requirements</i></p> <p>1.2. Ensure that a learning plan to meet individual and group training and development needs is collaboratively developed, agreed to and implemented</p> <p>1.3. Encourage individuals to self-evaluate performance and identify areas for improvement</p> <p>1.4. Collect <i>feedback on performance</i> of team members from relevant sources and compare with established team learning needs</p>
2. Develop individuals and teams	<p>2.1. Identify learning and development program goals and objectives, ensuring a match to the specific knowledge and skill requirements of competency standards relevant to the industry</p> <p>2.2. Ensure that <i>learning delivery methods</i> are appropriate to the learning goals, the learning style of participants, and availability of <i>equipment and resources</i></p> <p>2.3. Provide workplace learning opportunities, and <i>coaching and mentoring assistance</i> to facilitate individual and team achievement of competencies</p> <p>2.4. Create development opportunities that incorporates a</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>range of activities and support materials appropriate to the achievement of identified competencies</p> <p>2.5. Identify and approve resources and time lines required for learning activities in accordance with organisational requirements</p>
3. Monitor and evaluate workplace learning	<p>3.1. Use feedback from individuals or teams to identify and implement improvements in future learning arrangements</p> <p>3.2. Assess and record outcomes and performance of individuals/teams to determine the effectiveness of development programs and the extent of additional development support</p> <p>3.3. Negotiate modifications to learning plans to improve the efficiency and effectiveness of learning</p> <p>3.4. Document and maintain records and reports of competency according to organisational requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to receive and report on feedback, to maintain effective relationships and to manage conflict
- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- leadership skills to gain trust and confidence of clients and colleagues
- literacy skills to read, write and understand a variety of texts; and to edit and proofread documents to ensure clarity of meaning, accuracy and consistency of information
- negotiation skills to achieve mutually acceptable outcomes
- technology skills to support effective communication and presentation.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles

REQUIRED SKILLS AND KNOWLEDGE

- codes of practice
- privacy laws
- occupational health and safety (OHS)
- facilitation techniques to encourage team development and improvement
- organisational policies, plans and procedures
- career paths and competency standards relevant to the industry.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- identifying and implementing learning opportunities for others
- giving and receiving feedback from team members to encourage participation in and effectiveness of team
- creating learning plans to match skill needs
- knowledge of relevant legislation.

Context of and specific resources for assessment

Assessment must ensure:

- access to an actual workplace or simulated environment
- access to office equipment and resources
- examples of learning and development plans, policies and procedures
- examples of documents relating to diversity policies and procedures.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- analysis of responses to case studies and scenarios

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> oral or written questioning to assess knowledge of career paths and competency standards relevant to the industry review of records and reports of competency.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> management units other learning and development units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Learning and development needs</i> may include:</p>	<ul style="list-style-type: none"> career planning/development coaching, mentoring and/or supervision formal/informal learning programs internal/external training provision performance appraisals personal study recognition of current competence/skills recognition work experience/exchange/opportunities workplace skills assessment
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> access and equity principles and practices anti-discrimination and related policy business and performance plans confidentiality and security requirements defined resource parameters ethical standards goals, objectives, plans, systems and processes legal and organisational policies, guidelines and requirements

RANGE STATEMENT	
	<ul style="list-style-type: none"> • OHS policies, procedures and programs • quality and continuous improvement processes and standards • quality assurance and/or procedures manuals
<i>Feedback on performance</i> may include:	<ul style="list-style-type: none"> • formal/informal performance appraisals • obtaining feedback from clients • obtaining feedback from supervisors and colleagues • personal, reflective behaviour strategies • routine organisational methods for monitoring service delivery
<i>Learning delivery methods</i> may include:	<ul style="list-style-type: none"> • conference and seminar attendance • formal course participation • induction • involvement in professional networks • on-the-job coaching or mentoring • presentations/demonstrations • problem-solving • work experience
<i>Equipment and resources</i> may include:	<ul style="list-style-type: none"> • facilities • funding • guest speakers • technological tools and equipment • time • training equipment such as whiteboards and audio-visual equipment
<i>Coaching and mentoring assistance</i> may include:	<ul style="list-style-type: none"> • fair and ethical practice • non-discriminatory processes and activities • presenting and promoting a positive image of the collective group • problem-solving • providing encouragement • providing feedback to another team member • respecting the contribution of all participants and giving credit for achievements

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Workforce Development - Learning and Development
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Co-requisite units

Co-requisite units		

BSBLED501A Develop a workplace learning environment

Modification History

Not applicable.

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit describes the performance outcomes, skills and knowledge required to encourage and support the development of a learning environment in which work and learning come together. Particular emphasis is on the development of strategies to facilitate and promote learning, and to monitor and improve learning performance.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>This unit applies to managers. All managers have a prominent role in encouraging, supporting and facilitating the development of a learning environment in which work and learning come together.</p> <p>At this level work will normally be carried out within complex and diverse methods and procedures, which require the exercise of considerable discretion and judgement, using a range of problem solving and decision making strategies.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

<p>Prerequisite units</p>		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Create learning opportunities	1.1. Identify potential formal and informal <i>learning opportunities</i> 1.2. Identify <i>learning needs</i> of individuals in relation to the needs of the team and/or enterprise, and available learning opportunities 1.3. Develop and implement <i>learning plans</i> as an integral part of individual and team performance plans 1.4. Develop strategies to ensure that learning plans reflect the <i>diversity of needs</i> 1.5. Ensure organisational procedures maximise individual and team access to, and participation in, learning opportunities 1.6. Ensure effective liaison occurs with <i>training and development specialists</i> and contributes to learning opportunities which enhance individual, team and organisational performance

ELEMENT	PERFORMANCE CRITERIA
2. Facilitate and promote learning	<p>2.1. Develop strategies to ensure that workplace learning opportunities are used and that team members are encouraged to share their skills and knowledge to <i>encourage a learning culture</i> within the team</p> <p>2.2. Implement organisational procedures to ensure workplace learning opportunities contribute to the development of appropriate workplace knowledge, skills and attitudes</p> <p>2.3. Implement policies and procedures to encourage team members to assess their own competencies, and to identify their own learning and development needs</p> <p>2.4. Share the benefits of learning with others in the team and organisation</p> <p>2.5. Recognise workplace achievement by timely and appropriate recognition, feedback and rewards</p>
3. Monitor and improve learning effectiveness	<p>3.1. Use strategies to ensure that team and individual learning performance is monitored to determine the type and extent of any additional work-based support required, and any occupational health and safety (OHS) issues</p> <p>3.2. Use feedback from individuals and teams to identify and introduce improvements in future learning arrangements</p> <p>3.3. Make adjustments, negotiated with training and development specialists, for improvements to the efficiency and effectiveness of learning</p> <p>3.4. Use processes to ensure that records and reports of competency are documented and maintained within the organisation's systems and procedures to inform future planning</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - deal with people openly and fairly

REQUIRED SKILLS AND KNOWLEDGE

- encourage colleagues to share their knowledge and skills
- gain the trust and confidence of colleagues
- use consultation skills effectively
- literacy skills to access and use workplace information
- planning and organisational skills to facilitate, promote and monitor learning by:
 - developing learning plans
 - establishing a workplace which is conducive to learning
 - evaluating the effectiveness of learning
 - identifying learning needs
 - negotiating learning arrangements with training and development specialists
 - selecting and using work activities to create learning opportunities
 - using coaching and mentoring to support learning.

Required knowledge

- management of relationships to achieve a learning environment
- principles and techniques involved in the management and organisation of:
 - adult learning
 - coaching and mentoring
 - consultation and communication
 - improvement strategies
 - leadership
 - learning environment and learning culture
 - monitoring and reviewing workplace learning
 - problem identification and resolution
 - record keeping and management methods
 - structured learning
 - work-based learning.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

EVIDENCE GUIDE	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • methods for reviewing performance development needs and techniques for providing feedback on those needs • models for planning professional development • options available for professional development • knowledge of relationship management required to achieve a learning environment.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • assessment of written reports • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of performance in role plays • observation of presentations • oral or written questioning to assess knowledge of the principles and techniques involved in the management and organisation of adult learning • review of the development and implementation of learning plans • evaluation of how workplace achievement is recognised • review of processes used to record and report competency.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other units from the Diploma of Management.

Range Statement

RANGE STATEMENT

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Learning opportunities</i> may include:</p>	<ul style="list-style-type: none"> • structured learning activities conducted outside and within the workplace such as: <ul style="list-style-type: none"> • accredited training through an independent organisation such as a state/territory OHS authority • action learning • short courses • training through a Registered Training Organisation (RTO) leading to a nationally recognised Australian Qualifications Framework (AQF) qualification or Statement of Attainment • workshops • workplace learning activities, that may also contribute to a recognised credential, such as: <ul style="list-style-type: none"> • coaching • exchange/rotation • induction • mentoring • shadowing
<p><i>Learning needs</i> may include:</p>	<ul style="list-style-type: none"> • developmental learning, for example the learning required to progress through an organisation and take on new tasks and roles • gaps between the competencies held by the employee, and the skills and knowledge required to effectively undertake workplace tasks
<p><i>Learning plans</i> may include:</p>	<ul style="list-style-type: none"> • codes of conduct • key performance indicators • negotiated agreement with individual/s • OHS requirements • performance standards • team competencies • team roles and responsibilities • work outputs and processes

RANGE STATEMENT	
<i>Diversity of needs</i> may include:	<ul style="list-style-type: none"> learning needs that relate to social, cultural and other types of workplace diversity, such as the need for varied communication styles and approaches
<i>Training and development specialists</i> may be:	<ul style="list-style-type: none"> internal external
<i>Encourage a learning culture</i> may refer to:	<ul style="list-style-type: none"> encouraging learning and sharing skills and knowledge across the work team and the wider organisation to develop competencies of individual team members and the team as a whole

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units	

BSBMGT402A Implement operational plan

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to implement the operational plan by monitoring and adjusting operational performance, producing short term plans for the department/section, planning and acquiring resources and providing reports on performance as required.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Frontline managers are actively engaged in planning activities to achieve the measurable, stated objectives of the team and the organisation. This key role is carried out to provide safe, efficient and effective products and services to customer satisfaction within the organisation's productivity and profitability plans.</p> <p>At this level, work will normally be carried out within routine and non routine methods and procedures, which require planning, evaluation, leadership and guidance of others.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement operational plan	<p>1.1. Collate, analyse and organise details of <i>resource requirements</i> in consultation with <i>relevant personnel, colleagues and specialist resource managers</i></p> <p>1.2. Implement <i>operational plans</i> to contribute to the achievement of organisation's performance/business plan</p> <p>1.3. Identify and use <i>key performance indicators</i> (KPIs) to monitor operational performance</p> <p>1.4. Undertake <i>contingency planning</i> and <i>consultation processes</i></p> <p>1.5. Provide assistance in the development and presentation of proposals for resource requirements in line with operational planning processes</p>
2. Implement resource acquisition	<p>2.1. Recruit and induct employees within <i>organisation's policies, practices and procedures</i></p> <p>2.2. Implement plans for acquisition of physical</p>

ELEMENT	PERFORMANCE CRITERIA
	resources and services within organisation's policies, practices and procedures and in consultation with relevant personnel
3. Monitor operational performance	<p>3.1. Monitor <i>performance systems and processes</i> to assess progress in achieving profit/productivity plans and targets</p> <p>3.2. Analyse and use budget and actual financial information to monitor profit/productivity performance</p> <p>3.3. Identify unsatisfactory performance and take prompt action to rectify the situation according to organisational policies</p> <p>3.4. Provide mentoring, coaching and supervision to support individuals and teams to use resources effectively, economically and safely</p> <p>3.5. Present recommendations for variation to operational plans to the <i>designated persons/groups</i> and gain approval</p> <p>3.6. Implement <i>systems, procedures and records</i> associated with performance in accordance with organisation's requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- coaching and mentoring skills to provide support to colleagues
- literacy skills to access and use workplace information, and to prepare reports
- planning and organising skills to monitor performance and to sequence work of self and others to achieve planned outcomes.

Required knowledge

- principles and techniques associated with:
 - contingency planning
 - methods for monitoring and reporting on performance
 - monitoring and implementing operations and procedures
 - problem identification and methods of resolution

REQUIRED SKILLS AND KNOWLEDGE

- relevant budgeting and financial analysis, interpretation and reporting requirements
- resource management systems at the tactical implementation level
- resource planning and acquisition
- tactical risk analysis including identification and reporting requirements.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- ability to monitor and adjust operational performance, produce short-term plans for the department or section, plan and acquire resources, and provide reports on performance as required
- knowledge of principles and techniques associated with monitoring and implementing operations and procedures.

Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- review of documentation outlining contingency planning and consultation processes undertaken
- demonstration of techniques in managing performance
- evaluation of mentoring, coaching and supervision provided to support individuals and teams to use resources effectively, economically and safely.

EVIDENCE GUIDE**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- other units from the Certificate IV in Frontline Management.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Resource requirements may refer to:

- goods and services to be purchased and ordered
- human, physical and financial resources - both current and projected
- stock requirements and requisitions

Relevant personnel, colleagues and specialist resource managers may include:

- colleagues and specialist resource managers
- managers
- occupational health and safety committees and other people with specialist responsibilities
- other employees
- people from a wide range of social, cultural and ethnic backgrounds, and people with a range of physical and mental abilities
- supervisors

Operational plans may refer to:

- organisational plans
- tactical plans developed by the department or section to detail product and service performance

Key performance indicators may refer to:

- measures for monitoring or evaluating the efficiency or effectiveness of a system, and which may be used to demonstrate accountability and to identify areas for improvements

RANGE STATEMENT	
<i>Contingency planning</i> may refer to:	<ul style="list-style-type: none"> • contracting out or outsourcing human resources and other functions or tasks • diversification of outcomes • finding cheaper or lower quality raw materials and consumables • increasing sales or production • recycling and re-use • rental, hire purchase or alternative means of procurement of required materials, equipment and stock • restructuring of organisation to reduce labour costs • risk identification, assessment and management processes • seeking further funding • strategies for reducing costs, wastage, stock or consumables • succession planning
<i>Consultation processes</i> may refer to:	<ul style="list-style-type: none"> • mechanisms used to provide feedback to the work team in relation to outcomes of consultation • meetings, interviews, brainstorming sessions, email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual operational plans
<i>Organisation's policies, practices and procedures</i> may include:	<ul style="list-style-type: none"> • organisational culture • Standard Operating Procedures • organisational guidelines which govern and prescribe operational functions, such as the acquisition and management of human and physical resources • undocumented practices in line with organisational operations
<i>Performance systems and processes</i> may refer to:	<ul style="list-style-type: none"> • informal systems used by frontline managers for the work team in the place of existing organisation-wide systems • formal processes within the organisation to measure performance, such as: <ul style="list-style-type: none"> • feedback arrangements • individual and teamwork plans

RANGE STATEMENT	
	<ul style="list-style-type: none"> • KPIs • specified work outcomes
<i>Designated persons/groups</i> may include:	<ul style="list-style-type: none"> • other affected work groups or teams and groups designated in workplace policies and procedures • those who have the authority to make decisions and/or recommendations about operations such as workplace supervisors, other managers
<i>Systems, procedures and records</i> may include:	<ul style="list-style-type: none"> • databases and other recording mechanisms for ensuring records are kept in accordance with organisational requirements • individual and team performance plans • organisational policies and procedures relative to performance

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units	

BSBMGT403A Implement continuous improvement

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to implement the organisation's continuous improvement systems and processes. Particular emphasis is on using systems and strategies to actively encourage the team to participate in the process, monitoring and reviewing performance, and identifying opportunities for further improvements.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Frontline managers have an active role in implementing the continuous improvement process to achieve the organisation's objectives. Their position, closely associated with the creation and delivery of products and services, means that they have an important role in influencing the ongoing development of the organisation.</p> <p>At this level, work will normally be carried out within routine and non routine methods and procedures, which require planning and evaluation, and leadership and guidance of others.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement continuous improvement systems and processes	<p>1.1. Implement <i>systems</i> to ensure that individuals and teams are actively encouraged and supported to <i>participate in decision making processes</i>, assume responsibility and exercise initiative</p> <p>1.2. Communicate the organisation's <i>continuous improvement processes</i> to individuals and teams, and obtain feedback</p> <p>1.3. Ensure effective <i>mentoring and coaching</i> allows individuals and teams to implement the organisation's continuous improvement processes</p>
2. Monitor and review performance	<p>2.1. Use the organisation's systems and <i>technology</i> to monitor and review progress and to identify ways in which planning and operations could be improved</p> <p>2.2. Improve <i>customer service</i> through continuous improvement techniques and processes</p>

ELEMENT	PERFORMANCE CRITERIA
	2.3. Formulate and communicate recommendations for adjustments to those who have a role in their development and implementation
3. Provide opportunities for further improvement	3.1. Implement <i>processes to ensure that team members are informed of savings and productivity/service improvements</i> in achieving the business plan 3.2. Document work performance to aid the identification of further opportunities for improvement 3.3. Manage records, reports and recommendations for improvement within the organisation's systems and processes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - coach and mentor team members
 - gain the commitment of individuals and teams to continuously improve
- innovation skills to design better ways of performing work.

Required knowledge

- principles and techniques associated with:
 - benchmarking
 - best practice
 - change management
 - continuous improvement systems and processes
 - quality systems.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • taking active steps to implement, monitor and adjust plans, processes and procedures to improve performance • supporting others to implement the continuous improvement system/processes, and to identify and report opportunities for further improvement • knowledge of principles and techniques associated with continuous improvement systems and processes.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • assessment of written reports • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentations • oral or written questioning to assess knowledge of principles and techniques associated with change management • review of how the organisation's continuous improvement processes was communicated to individuals and teams • review of documentation of work performance.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other units from the Certificate IV in Frontline Management.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Systems</i> may refer to:	<ul style="list-style-type: none"> • forums, meetings • newsletters and reports • organisational policies and procedures • web-based communication devices
<i>Participation in decision making processes</i> may include:	<ul style="list-style-type: none"> • feedback in relation to outcomes of the consultative process • processes which ensures all employees have the opportunity to contribute to organisational issues
<i>Continuous improvement processes</i> may include:	<ul style="list-style-type: none"> • cyclical audits and reviews of workplace, team and individual performance • evaluations and monitoring of effectiveness • implementation of quality systems, such as International Standardization for Organization (ISO) • modifications and improvements to systems, processes, services and products • policies and procedures which allow the organisation to systematically review and improve the quality of its products, services and procedures • seeking and considering feedback from a range of stakeholders
<i>Mentoring and coaching</i> may refer to:	<ul style="list-style-type: none"> • providing assistance with problem-solving • providing feedback, support and encouragement • teaching another member of the team, usually focusing on a specific work task or skill
<i>Technology</i> may include:	<ul style="list-style-type: none"> • computerised systems and software such as databases, project management and word processing • telecommunications devices • any other technology used to carry out work roles and responsibilities

RANGE STATEMENT	
<i>Customer service</i> may be:	<ul style="list-style-type: none"> • internal or external • to existing, new or potential clients
<i>Processes to ensure that team members are informed of savings and productivity/service improvements</i> may refer to:	<ul style="list-style-type: none"> • email/intranet, newsletters or other communication devices • newsletters and bulletins • staff reward mechanisms • team meetings

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBMGT502B Manage people performance

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to manage the performance of staff who report to them directly. Development of key result areas and key performance indicators and standards, coupled with regular and timely coaching and feedback, provide the basis for performance management.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to all managers and team leaders who manage people. It covers work allocation and the methods to review performance, reward excellence and provide feedback where there is a need for improvement.</p> <p>The unit makes the link between performance management and performance development, and reinforces both functions as a key requirement for effective managers.</p> <p>This is a unit that all managers/prospective managers who have responsibility for other employees should strongly consider undertaking.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Allocate work	1.1. Consult relevant groups and individuals on work to be allocated and resources available 1.2. Develop work plans in accordance with operational plans 1.3. Allocate work in a way that is efficient, cost effective and outcome focussed 1.4. Confirm <i>performance standards, Code of Conduct</i> and work outputs with relevant teams and individuals 1.5. Develop and agree <i>performance indicators</i> with relevant staff prior to commencement of work 1.6. Conduct <i>risk analysis</i> in accordance with the organisational risk management plan and legal requirements
2. Assess performance	2.1. Design <i>performance management</i> and review processes to ensure consistency with organisational

ELEMENT	PERFORMANCE CRITERIA
	<p>objectives and policies</p> <p>2.2. Train participants in the performance management and review process</p> <p>2.3. Conduct performance management in accordance with organisational protocols and time lines</p> <p>2.4. Monitor and evaluate performance on a continuous basis</p>
3. Provide feedback	<p>3.1. Provide informal feedback to staff on a regular basis</p> <p>3.2. Advise relevant people where there is poor performance and take necessary actions</p> <p>3.3. Provide on-the-job coaching when necessary to improve performance and to confirm <i>excellence in performance</i></p> <p>3.4. Document performance in accordance with the organisational performance management system</p> <p>3.5. Conduct formal structured feedback sessions as necessary and in accordance with organisational policy</p>
4. Manage follow up	<p>4.1. Write and agree performance improvement and development plans in accordance with organisational policies</p> <p>4.2. Seek assistance from human resources specialists where appropriate</p> <p>4.3. Reinforce excellence in performance through recognition and continuous feedback</p> <p>4.4. Monitor and coach individuals with poor performance</p> <p>4.5. Provide support services where necessary</p> <p>4.6. Counsel individuals who continue to perform below expectations and implement the disciplinary process if necessary</p> <p>4.7. <i>Terminate</i> staff in accordance with legal and organisational requirements where serious misconduct occurs or ongoing poor-performance continues</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to articulate expected standards of performance, to provide effective feedback and to coach staff who need development
- risk management skills to analyse, identify and develop mitigation strategies for identified risks
- planning and organisation skills to ensure a planned and objective approach to the performance management system.

Required knowledge

- relevant legislation from all levels of government that affects business operation, especially in regard to occupational health and safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- relevant awards and certified agreements
- performance measurement systems utilised within the organisation
- unlawful dismissal rules and due process
- staff development options and information.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- documented performance indicators and a critical description and analysis of performance management system from the workplace
- techniques in providing feedback and coaching for improvement in performance
- knowledge of relevant awards and certified agreements.

Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

EVIDENCE GUIDE	
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • assessment of written reports • demonstration of techniques in providing feedback and coaching • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of work plans, performance indicators, risk analysis, performance management and review processes, performance improvement and development plans.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other management units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Performance standards</i> mean:	<ul style="list-style-type: none"> • level of performance sought from an individual or group which may be expressed either quantitatively or qualitatively
<i>Code of Conduct</i> means:	<ul style="list-style-type: none"> • agreed (or decreed) set of rules relating to employee behaviour/conduct with other employees or an agreed (or decreed) set of rules relating to employee behaviour/conduct with other employees or customers
<i>Performance indicators</i> mean:	<ul style="list-style-type: none"> • measures against which performance outcomes are gauged

RANGE STATEMENT	
<i>Risk analysis</i> means:	<ul style="list-style-type: none"> determination of the likelihood of a negative event preventing the organisation meeting its objectives and the likely consequences of such an event on organisational performance
<i>Performance management</i> means:	<ul style="list-style-type: none"> in accordance with relevant industrial agreements process or set of processes for establishing a shared understanding of what an individual or group is to achieve, and managing and developing individuals in a way which increases the probability it will be achieved in both the short- and long-term
<i>Excellence in performance</i> means:	<ul style="list-style-type: none"> regularly and consistently exceeding the performance targets established while meeting the organisation's performance standards
<i>Termination</i> means:	<ul style="list-style-type: none"> cessation of the contract of employment between an employer and an employee, at the initiative of the employer within relevant industrial agreements

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units	

BSBMGT515A Manage operational plan

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to develop and monitor implementation of the operational plan to provide efficient and effective workplace practices within the organisation's productivity and profitability plans.</p> <p>Management at a strategic level requires systems and procedures to be developed and implemented to facilitate the organisation's operational plan.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to people who manage the work of others and operate within the parameters of a broader strategic and/or business plan. The task of the manager at this level is to develop and implement an operational plan to ensure that the objectives and strategies outlined in the strategic and/or business plan are met by work teams. However in some larger organisations operational plans may be developed by a strategic planning unit.</p> <p>At this level work will normally be carried out within complex and diverse methods and procedures, which require the exercise of considerable discretion and judgement, using a range of problem solving and decision making strategies.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop operational plan	<p>1.1. Research, analyse and document <i>resource requirements</i> and develop an operational plan in consultation with <i>relevant personnel, colleagues and specialist resource managers</i></p> <p>1.2. Develop and/or implement <i>consultation processes</i> as an integral part of the operational planning process</p> <p>1.3. Ensure details of the operational plan include the development of <i>key performance indicators</i> to measure organisational performance</p> <p>1.4. Develop and implement <i>contingency plans</i> at appropriate stages of operational planning</p> <p>1.5. Ensure the development and presentation of proposals for resource requirements is supported by a variety of information sources and seek specialist</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>advice as required</p> <p>1.6. Obtain approval for plan from relevant parties and ensure understanding among work teams involved</p>
2. Plan and manage resource acquisition	<p>2.1. Develop and implement strategies to ensure that employees are recruited and/or inducted within the organisation's human resources management policies and practices</p> <p>2.2. Develop and implement strategies to ensure that physical resources and services are acquired in accordance with the <i>organisation's policies, practices and procedures</i></p>
3. Monitor and review operational performance	<p>3.1. Develop, monitor and review performance systems and processes to assess progress in achieving profit and productivity plans and targets</p> <p>3.2. Analyse and interpret budget and actual financial information to monitor and review profit and productivity performance</p> <p>3.3. Identify areas of under performance, recommend solutions, and take prompt action to rectify the situation</p> <p>3.4. Plan and implement systems to ensure that mentoring and coaching are provided to support individuals and teams to effectively, economically and safely use resources</p> <p>3.5. Negotiate recommendations for variations to operational plans and gain approval from <i>designated persons/groups</i></p> <p>3.6. Develop and implement systems to ensure that procedures and records associated with documenting performance are managed in accordance with organisational requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to access and use workplace information and to write a succinct and

REQUIRED SKILLS AND KNOWLEDGE

practical plan

- technology skills to use software to produce and monitor the plan against performance indicators
- planning and organisational skills
- coaching skills to work with people with poor performance
- numeracy skills to allocate and manage financial resources.

Required knowledge

- models and methods for operational plans
- budgeting processes
- alternative approaches to improving resource usage and eliminating resource inefficiencies and waste.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- development of an operational plan with details of how it will be implemented and monitored
- knowledge of models and methods for operational plans.

Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- oral or written questioning to assess knowledge of budgeting processes
- review of operational plan, key performance

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> indicators and contingency plans evaluation of employee recruitment and induction strategies evaluation of processes implemented to acquire physical resources and services.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other units from the Diploma of Management.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Resource requirements</i> may include:	<ul style="list-style-type: none"> goods and services to be purchased and ordered human, physical and financial resources - both current and projected stock requirements and requisitions
<i>Relevant personnel, colleagues and specialist resource managers</i> may include:	<ul style="list-style-type: none"> employees at the same level or more senior managers managers occupational health and safety committee/s and other people with specialist responsibilities supervisors union or employee representatives
<i>Consultation processes</i> may refer to:	<ul style="list-style-type: none"> email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual operational plans mechanisms used to provide feedback to the work team in relation to outcomes of

RANGE STATEMENT	
	<ul style="list-style-type: none"> consultation • meetings, interviews, brainstorming sessions
<i>Operational plans</i> may also be termed:	<ul style="list-style-type: none"> • action plans • annual plans • management plans • tactical plans
<i>Key performance indicators</i> may refer to:	<ul style="list-style-type: none"> • measures for monitoring or evaluating the efficiency or effectiveness of a system which may be used to demonstrate accountability and to identify areas for improvements
<i>Contingency plans</i> may include:	<ul style="list-style-type: none"> • contracting out or outsourcing human resources and other functions or tasks • diversification of outcomes • finding cheaper or lower quality raw materials and consumables • increasing sales or production • recycling and re-using • rental, hire purchase or alternative means of procurement of required materials, equipment and stock • restructuring of organisation to reduce labour costs • risk identification, assessment and management processes • seeking further funding • strategies for reducing costs, wastage, stock or consumables • succession planning
<i>Organisation's policies, practices and procedures</i> may include:	<ul style="list-style-type: none"> • organisational culture • organisational guidelines which govern and prescribe operational functions, such as the acquisition and management of human and physical resources • Standard Operating Procedures • undocumented practices in line with organisational operations
<i>Designated persons/groups</i> may include:	<ul style="list-style-type: none"> • groups designated in workplace policies and procedures • managers or supervisors whose roles and responsibilities include decision making on operations • other stakeholders such as Board members

RANGE STATEMENT	
	<ul style="list-style-type: none"> • other work groups or teams whose work will be affected by recommendations for variations

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBMGT516C Facilitate continuous improvement

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to lead and manage continuous improvement systems and processes. Particular emphasis is on the development of systems and the analysis of information to monitor and adjust performance strategies, and to manage opportunities for further improvements.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to managers who take an active role in managing a continuous improvement process in order to achieve an organisation's objectives. Where managers are closely associated with the creation and delivery of products and services, they play an important part in influencing the ongoing development of the organisation.</p> <p>At this level, work will normally be carried out using complex and diverse methods and procedures which require the exercise of considerable discretion and judgement, using a range of problem-solving and decision-making strategies.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Lead continuous improvement systems and processes	<p>1.1. Develop <i>strategies</i> to ensure that team members are actively encouraged and supported to participate in decision-making processes, assume responsibility and exercise initiative as appropriate</p> <p>1.2. Establish <i>systems</i> to ensure that the organisation's <i>continuous improvement processes</i> are communicated to <i>stakeholders</i></p> <p>1.3. Ensure that change and improvement processes meet <i>sustainability requirements</i></p> <p>1.4. Develop effective mentoring and coaching processes to ensure that individuals and teams are able to implement and support the organisation's continuous improvement processes</p> <p>1.5. Ensure that insights and experiences from business activities are captured and accessible through</p>

ELEMENT	PERFORMANCE CRITERIA
	<i>knowledge management systems</i>
2. Monitor and adjust performance strategies	2.1. Develop strategies to ensure that systems and processes are used to monitor <i>operational progress</i> and to identify ways in which planning and operations could be improved 2.2. Adjust and communicate strategies to stakeholders according to organisational procedures
3. Manage opportunities for further improvement	3.1. Establish processes to ensure that team members are informed of outcomes of continuous improvement efforts 3.2. Ensure processes include <i>recording of work team performance</i> to assist in identifying further opportunities for improvement 3.3. Consider areas identified for further improvement when undertaking future planning

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to communicate opportunities for improvement
- learning skills to coach and mentor staff, using a range of methods to cater for different learning styles
- innovation and lateral thinking skills to design better ways for achieving work outcomes
- planning skills to establish and monitor systems and process for continuous improvement
- teamwork and leadership skills to gain the confidence and trust of others

Required knowledge

- continuous improvement models
- knowledge management systems
- quality systems
- sustainability principles

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> development and use of a range of strategies and approaches that improve work outcomes or organisational functioning, using continuous improvement models monitoring performance and customer service.
Context of and specific resources for assessment	Assessment must ensure access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>The following assessment methods are appropriate for this unit:</p> <ul style="list-style-type: none"> analysis of responses to case studies and scenarios assessment of reports direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate observation of presentations oral or written questioning to assess knowledge of quality systems review of strategies developed to ensure that team members are actively encouraged and supported to participate in decision-making processes, assume responsibility and exercise initiative evaluation of how customer-service strategies were communicated to stakeholders review of documentation outlining work team performance.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT
The range statement relates to the unit of competency as a whole. It allows for different

RANGE STATEMENT	
work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Strategies</i> may refer to:	<ul style="list-style-type: none"> • clarification of roles and expectations • communication devices and processes, such as intranet and email communication systems, to facilitate input into workplace decisions • long-term or short-term plans that factor in opportunities for team input • mentoring and 'buddy' systems to support team members to participate in decision making • performance plans • reward and recognition programs for high performing staff • training and development activities.
<i>Systems</i> may refer to:	<ul style="list-style-type: none"> • forums and meetings • newsletters and reports • policies and procedures • electronic communication devices.
<i>Continuous improvement processes</i> may include:	<ul style="list-style-type: none"> • cyclical audits and reviews of workplace, team and individual performance • evaluations and monitoring of effectiveness • modifications and improvements to systems, processes, services and products • policies and procedures that allow an organisation to systematically review and improve the quality of its products, services and procedures • seeking and considering feedback from a range of stakeholders.
<i>Stakeholders</i> may include:	<ul style="list-style-type: none"> • business or government contacts • funding bodies • individuals within the work team • internal and external contacts • organisation's clients and customers • professional associations • senior management and board members • unions and employee groups.
<i>Sustainability requirements</i> may	<ul style="list-style-type: none"> • addressing environmental and resource sustainability initiatives, such as environmental management systems,

RANGE STATEMENT

include:	<p>action plans, green office programs, surveys and audits</p> <ul style="list-style-type: none"> • applying the waste management hierarchy in the workplace • complying with regulations and corporate social responsibility considerations for sustainability to enhance the organisation's standing in business and community environments • determining organisation's most appropriate waste treatment, including waste to landfill, recycling, re-use, recoverable resources and wastewater treatment • implementing ecological footprinting • implementing environmental management systems, e.g. ISO 14001:1996 Environmental management systems life cycle analyses • implementing government initiatives, e.g. Australian government's Greenhouse Challenge Plus • improving resource and energy efficiency • initiating and maintaining appropriate organisational procedures for operational energy consumption • introducing a green office program (a cultural change program) • introducing green purchasing • introducing national and international reporting initiatives, e.g. Global Reporting Initiative • introducing product stewardship • reducing emissions of greenhouse gases • reducing use of non-renewable resources • referencing standards, guidelines and approaches, such as sustainability covenants and compacts or triple bottom line reporting • supporting sustainable supply chain.
Knowledge management systems may include:	<ul style="list-style-type: none"> • best practice transfer • communities of practice • cross-project learning • expert directories • knowledge brokers' knowledge mapping • knowledge repositories • measuring and reporting intellectual capital • mentoring • performance management • post-project reviews • proximity and architecture

RANGE STATEMENT	
	<ul style="list-style-type: none"> • social software • storytelling.
<i>Operational progress</i> may refer to:	<ul style="list-style-type: none"> • customer service indicators • OHS indicators • productivity gains • success in meeting agreed goals and performance indicators.
<i>Recording of work team performance</i> may include:	<ul style="list-style-type: none"> • annotated performance plans • quantitative data, such as production figures • recommendations for improvement • records and reports.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and leadership - management
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Co-requisite units

Co-requisite units		

BSBMGT608C Manage innovation and continuous improvement

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to sustain and develop an environment in which continuous improvement, innovation and learning are promoted and rewarded.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to people with managerial responsibilities, including for building a better and more effective work environment. Continuous improvement and innovation have links with the model of the learning organisation and people working at this level play an important role in building the culture, values and attitudes of the organisation.</p> <p>Links may be made between continuous improvement and formal quality systems, such as International Organization for Standardization (ISO) or quality software. However it is not assumed that formal quality systems or software are in the workplace.</p> <p>Innovation is seen as an important attitude and set of practices, which should be fostered by people working at this level in teams and across the organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Review programs, systems and processes	1.1. Establish strategies to monitor and evaluate performance and <i>sustainability</i> of key systems and processes 1.2. Undertake detailed analyses of <i>supply chains</i> , and operational, product and service delivery systems 1.3. Identify performance measures, and assessment tools and techniques, and evaluate their effectiveness 1.4. Analyse <i>performance reports</i> and variance from plans for key result areas of the organisation 1.5. Identify and analyse changing trends and opportunities relevant to the organisation 1.6. Seek advice from specialists, where appropriate, to identify technology and electronic commerce opportunities

ELEMENT	PERFORMANCE CRITERIA
2. Develop options for continuous improvement	2.1. Brief groups on performance improvement strategies and innovation as an essential element of competition 2.2. Foster creative climate and organisational learning by promoting interaction within and between work groups 2.3. Encourage, test and recognise new ideas and entrepreneurial behaviour where successful 2.4. Accept failure of an idea during trialling, and recognise, celebrate and embed success into systems 2.5. Undertake risk management and cost-benefit analysis for each option or idea approved for trial 2.6. Approve innovations through agreed organisational processes
3. Implement innovative processes	3.1. Promote continuous improvement and sustainability as essential to doing business 3.2. Address impact of change and consequences for people, and implement transition plans 3.3. Ensure objectives, timeframes, measures and communication plans are in place to manage implementation 3.4. Implement contingency plans in the event of non-performance 3.5. Follow up failure by prompt investigation and analysis of causes and manage emerging challenges and opportunities effectively 3.6. Ensure that learnings from activities are captured and managed to inform future work 3.7. Regularly evaluate continuous improvement systems and processes 3.8. Communicate costs and benefits of innovations and improvements to relevant groups and individuals

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

REQUIRED SKILLS AND KNOWLEDGE
<ul style="list-style-type: none"> • analytical skills to identify improvement opportunities in relation to: <ul style="list-style-type: none"> • concepts and ideas developed • services or products delivered • flexibility and creativity skills to think laterally • learning skills to develop options for continuous improvement • teamwork and leadership skills to foster a commitment to quality and an openness to innovation
Required knowledge
<ul style="list-style-type: none"> • cost-benefit analysis methods • creativity and innovation theories and concepts • organisational learning principles • quality management and continuous improvement theories • risk management • sustainability practices

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • demonstration of consultation processes to introduce or evaluate an existing continuous improvement process or system, including suggested actions or an action plan • generation of an idea or concept that exhibits creative thinking and offers the possibility of benefiting the organisation • demonstration of how the concept or idea was introduced, tested and evaluated, which does not have to have been shown to work or to be adopted by the business • application of knowledge of quality management and continuous improvement theories.
Context of and specific resources for assessment	<p>Assessment must ensure access to appropriate documentation and resources normally used in the workplace.</p>

EVIDENCE GUIDE	
Method of assessment	<p>The following assessment methods are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • assessment of reports • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate • observation of presentations • oral or written questioning to assess knowledge of creativity and innovation theories and concepts • evaluation of strategies established to monitor and evaluate performance of key systems and processes • review of briefing of groups on performance improvement strategies and innovation • review of documentation communicating costs and benefits of innovations and improvements to relevant groups and individuals.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Sustainability</i> may include:	<ul style="list-style-type: none"> • addressing environmental and resource sustainability initiatives, such as environmental management systems, action plans, green office programs, surveys and audits • applying the waste management hierarchy in the workplace • complying with regulations and corporate social responsibility considerations for sustainability to enhance the organisation's standing in business and community environments • determining organisation's most appropriate waste treatment, including waste to landfill, recycling, re-use,

RANGE STATEMENT	
	<p>recoverable resources and wastewater treatment</p> <ul style="list-style-type: none"> • implementing ecological footprint • implementing environmental management systems, e.g. ISO 14001:1996 Environmental management systems life cycle analyses • implementing government initiatives, e.g. Australian government's Greenhouse Challenge Plus • improving resource and energy efficiency • initiating and maintaining appropriate organisational procedures for operational energy consumption • introducing a green office program - a cultural change program • introducing green purchasing • introducing national and international reporting initiatives, e.g. Global Reporting Initiative • introducing product stewardship • reducing emissions of greenhouse gases • reducing use of non-renewable resources • referencing standards, guidelines and approaches, such as sustainability covenants and compacts or triple bottom line reporting • supporting sustainable supply chain.
<i>Supply chains</i> include:	<ul style="list-style-type: none"> • network of facilities that procures raw materials, transforms them into intermediate products or services and then finished goods or service, and delivers them through a distribution system • procurement, production and distribution, viewed as interlinked not as discrete elements.
<i>Performance reports</i> may include:	<ul style="list-style-type: none"> • budget or cost variance • customer service • environmental • financial • OHS • quality • other operating parameters.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and leadership - management
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Co-requisite units

Co-requisite units		

BSBMGT616A Develop and implement strategic plans

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to establish the strategic direction of the organisation, and to sustain competitive advantage and enhance competitiveness. It requires analysis and interpretation of relevant markets, capability assessment of the organisation, and its existing and potential competitors and allies. It also covers implementation of the strategic plan.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in senior roles in the organisation, who have responsibility for ensuring that the organisation is positioned to ensure its long term viability and success. The unit covers the requirements for analysing the organisation's present position, and for developing specific actions and initiatives that will be undertaken by people working in various roles.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm organisational vision and mission	1.1. Check with <i>stakeholders</i> that organisational vision and mission are still held to be current and are supported 1.2. Make any changes or refinements to vision or mission statement as required 1.3. Review or develop organisational values to support the vision and mission statement 1.4. Gain support for strategic planning process from all relevant stakeholders
2. Analyse the internal and external environment	2.1. Determine information requirements and undertake or commission <i>research</i> to deliver relevant information 2.2. Analyse political, economic, social, and technological developments in a <i>global context</i> 2.3. Seek advice from appropriate experts wherever necessary 2.4. Identify and consider strengths and weaknesses of

ELEMENT	PERFORMANCE CRITERIA
	<p>existing and potential competitors and allies</p> <p>2.5. Analyse organisation's strengths, weaknesses, opportunities and threats</p> <p>2.6. Consider co-operative ventures that are supported by risk and cost-benefit analyses, are consistent with the organisational vision, mission and values, and provide for <i>due diligence</i></p> <p>2.7. Check that analysis of internal and external environment is consistent with the perspectives of other informed people</p>
3. Write strategic plan	<p>3.1. Document relevant research and background for inclusion in the strategic plan</p> <p>3.2. Formulate strategic objectives and strategies needed for the future</p> <p>3.3. Detail each strategy with an assigned priority, a timeframe, responsible parties and measurable performance indicators</p> <p>3.4. Circulate strategic plan for comment, support and endorsement</p>
4. Implement strategic plan	<p>4.1. Communicate strategic plan to all relevant parties</p> <p>4.2. Brief people with a specific role in relation to strategies</p> <p>4.3. Use performance indicators to monitor progress in implementing plan</p> <p>4.4. Make necessary refinements to plan</p> <p>4.5. Evaluate achievement of objectives at agreed milestones</p> <p>4.6. Review effectiveness of plan and consider methods for improving strategic planning processes</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to undertake value chain analysis, to review strengths and weaknesses, and to collate and interpret statistical data including trend analysis

REQUIRED SKILLS AND KNOWLEDGE

- financial skills to consider resource implications of proposed strategies
- research skills to ensure accurate, up-to-date information is available for the environmental analysis
- risk management skills to plan and undertake appropriate due diligence.

Required knowledge

- relevant legislation from all levels of government that affects business operation, especially in regard to occupational health and safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- strategic planning methodologies including political, economic, social and technological (PEST) analysis and strengths, weaknesses, opportunities and threats analysis (SWOT)
- competitor knowledge
- codes and by-laws relevant to the organisation's operations.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- thorough analysis of the organisation's own capabilities, those of their existing potential competitors and allies, and the external environment
- strategic plan which includes objectives, strategies, timeframes, performance indicators and methods for monitoring the implementation of the plan
- knowledge of relevant legislation.

Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of

EVIDENCE GUIDE	
	<p>portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</p> <ul style="list-style-type: none"> • observation of presentations • oral or written questioning to assess knowledge of strategic planning methodologies • review of documentation outlining strengths and weaknesses of existing and potential competitors and allies • review of strategies and their assigned priority, timeframe, responsible parties and performance indicators.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other units from the Advanced Diploma of Management.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Stakeholders</i> may include:	<ul style="list-style-type: none"> • Board • customers • employees • government agencies • owners • shareholders • technical advisers
<i>Research</i> may include:	<ul style="list-style-type: none"> • commissioned research • demographics • economics • internal research • market segmentation

RANGE STATEMENT	
	<ul style="list-style-type: none"> • political • product • social • technological
<i>Global context</i> means:	<ul style="list-style-type: none"> • examination on a world-wide basis of factors which may impact on the long-term strategic direction of the business
<i>Due diligence</i> means:	<ul style="list-style-type: none"> • process by which an investor, lawyer, auditor, or other qualified person, verifies the accuracy of data provided by another organisation

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units	

BSBMKG501B Identify and evaluate marketing opportunities

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to identify, evaluate and take advantage of marketing opportunities by analysing market data, distinguishing the characteristics of possible markets and assessing the viability of changes to operations.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in senior marketing management roles who, together with a marketing team, identify, investigate and evaluate marketing opportunities to determine whether they meet organisational and marketing objectives. Based on this evaluation, changes to current business operations can be determined to take advantage of marketing opportunities.</p> <p>Adjusting the marketing mix in the light of new marketing opportunities is covered in BSBMKG502B Establish and adjust the marketing mix.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify marketing opportunities	<p>1.1. Analyse <i>information on market and business needs</i> to identify <i>marketing</i> opportunities</p> <p>1.2. Research potential <i>new markets</i> and assess opportunities to enter, shape or influence the market in terms of likely <i>contribution to the business</i></p> <p>1.3. Explore entrepreneurial, innovative approaches and creative ideas for their potential business application, and develop into potential marketing opportunities</p>
2. Investigate marketing opportunities	<p>2.1. Identify and analyse opportunities in terms of their likely fit with organisational goals and capabilities</p> <p>2.2. <i>Evaluate</i> each opportunity to determine its impact on current business and customer base</p> <p>2.3. Use an assessment of <i>external factors</i>, costs, benefits, risks and opportunities to determine the financial viability of each marketing opportunity</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Determine probable return on investment and potential competitors 2.5. Describe and rank marketing opportunities in terms of their viability and likely contribution to the business
3. Evaluate required changes to current operations	3.1. Identify and document changes needed to current operations to take advantage of viable marketing opportunities 3.2. Ensure organisational changes to service an increased or different customer base include provision for continued quality of service to existing customers 3.3. Estimate <i>resource requirements</i> for changed operations 3.4. Determine and communicate viability of making changes to current operations to <i>key stakeholders</i> 3.5. Document newly identified marketing opportunities and required changes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- literacy skills to identify and interpret market information, to write in a range of styles for different audiences and to document outcomes and requirements
- numeracy skills to calculate and evaluate financial information on new marketing options
- research and evaluation skills to gain information on and interpret market trends to identify marketing opportunities.

Required knowledge

- key provisions of relevant legislation from all forms of government, codes of practice and national standards that may affect aspects of business operations such as:
 - anti-discrimination legislation and the principles of equal opportunity, equity

REQUIRED SKILLS AND KNOWLEDGE

- and diversity
- ethical principles
 - marketing codes of practice and conduct such as the Australian Direct Marketing Association (ADMA) Direct Marketing Code of Practice; Free TV Australia Commercial Television Industry Code of Practice; and the Australian E-commerce Best Practice Model
 - privacy laws
 - Trade Practices Act
 - organisational marketing plan, structure, products and services
 - principles of marketing and the marketing mix
 - statistical methods and techniques to evaluate marketing opportunities, including forecasting techniques.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- identifying and evaluating marketing opportunities to determine whether they will meet organisational objectives
- documenting how current business operations will need to be modified and what resources will be required to take advantage of newly identified and evaluated opportunities.

Context of and specific resources for assessment

Assessment must ensure:

- access to office equipment and resources
- access to organisational strategic and marketing plans.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- analysis of responses to case studies

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • assessment of written reports on identified marketing opportunities and evaluation activities • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentations on opportunity identification, evaluation and required resources to capitalise on new marketing opportunities • oral or written questioning to assess knowledge and understanding • review of authenticated documents from the workplace or training environment • review of testimony from team members, colleagues, supervisors or managers.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBMKG502B Establish and adjust the marketing mix • international business units • other marketing units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Information on market and business needs</i> may include:</p>	<ul style="list-style-type: none"> • comparative market information • competitors' performance • customer requirements • legal and ethical requirements • market share • market trends and developments • new and emerging markets • profitability

RANGE STATEMENT	
	<ul style="list-style-type: none"> • sales figures
<i>Marketing</i> may include:	<ul style="list-style-type: none"> • business-to-business marketing • direct marketing • ideas marketing • marketing of goods • public sector marketing • services marketing • telemarketing
<i>New markets</i> may include:	<ul style="list-style-type: none"> • e-commerce • export markets • segments of the market not currently penetrated
<i>Contribution to the business</i> may include:	<ul style="list-style-type: none"> • effect on sales volume • growth • market share • profitability
<i>Evaluation</i> may include:	<ul style="list-style-type: none"> • investigation of: <ul style="list-style-type: none"> • knockout factors • present value analysis • return on investment • scored criteria • weighted criteria
<i>External factors</i> may include:	<ul style="list-style-type: none"> • codes of practice • policies and guidelines • regulations • relevant legislation
<i>Resource requirements</i> may include:	<ul style="list-style-type: none"> • additional staff • distribution costs • equipment • production costs • promotional costs • research and development • re-tooling • staff training
<i>Key stakeholders</i> may include:	<ul style="list-style-type: none"> • Board of directors • finance staff • human resources staff • managers • marketing personnel

RANGE STATEMENT

	<ul style="list-style-type: none"> • owners • production staff • supervisors
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Unit Sector(s)

Unit sector	
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Competency field

Competency field	Business Development - Marketing
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Co-requisite units

Co-requisite units		

BSBPMG414A Apply project information management and communications techniques

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Services Training Package Version 8.0</i>.</p> <p>Replaces BSBPMG406A Apply communications management techniques.</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to provide a critical link between people, ideas and information at all stages in the project life cycle. It involves assisting the project team to plan communications, communicating information related to the project, and reviewing communications.

Application of the Unit

This unit applies to a project practitioner working in a project support role.

The individual may be operating in a large or small organisation and applying skills in the context of enterprise projects.

The project practitioner may be part of a project team under the direction of a project manager, or may work as part of a smaller scale self-directed team.

This unit has generic application to a range of industries and organisations and a range of projects, from simple to complex.

In the context of this unit a project is defined as involving:

- a practical and comprehensive project plan
- a documented communications strategy
- a detailed project budget

- strategic engagement with stakeholders
- a risk, issues and change-management methodology
- a quality plan with assurance and control processes
- a supportive team-based environment.

The functions performed in project work, where formal project management methodology is not the main focus, are covered by BSBPMG522A Undertake project work.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Contribute to communications planning	1.1 Identify, source and contribute relevant information requirements to initial project documentation 1.2 Contribute to developing and implementing the project <i>communications plan</i> and communications networks
2. Conduct information-management activities	2.1 Act on and <i>process project information</i> according to agreed procedures as directed, to aid decision-making processes throughout project life cycle

	2.2 Maintain information to ensure data is secure and auditable
3. Communicate project information	<p>3.1 <i>Communicate with clients and other stakeholders</i> during project using agreed networks, processes and procedures to ensure flow of necessary information</p> <p>3.2 Ensure reports are prepared and released according to authorisation, or produced for release by <i>others</i></p> <p>3.3 Seek information and advice from appropriate project authorities as required</p>
4. Contribute to assessing effectiveness of communication	<p>4.1 Assist in the ongoing review of project outcomes to determine the effectiveness of communications-management activities</p> <p>4.2 Report communications-management issues and responses to higher project authorities for application of lessons learned to future projects</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to produce reports and project communications for stakeholders
- planning and organising skills to sort and prioritise information and ideas
- teamwork and communication skills to acquire and disseminate relevant project information
- technology skills to manage information dissemination, storage and retrieval.

Required knowledge

- communications theory
- models and methods of communications management in the context of the project life cycle and other project-management functions.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • contributing to the development and implementation of communications plans in relation to a workplace project • knowledge of communications theory.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • examples of project management documentation for communications-management purposes • records of project team involvement in communications activities.
Method of assessment	<p>A range of assessment methods should be used to assess practical skill and knowledge. The following assessment methods are appropriate for this unit:</p> <ul style="list-style-type: none"> • written reports or examples of project communications • observation of performance in role plays that demonstrate techniques in communicating important project information • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate • analysis of responses addressing different project scenarios presenting issues and problems in project communications management • oral or written questioning to assess knowledge of strategies for managing project communications • review of communication-management issues and responses reported to higher project authorities.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Communications plan</i> may include:	<ul style="list-style-type: none"> • list of which team member is responsible for particular communication activities • methods and protocols for communicating information • which stakeholders need what information • when information is communicated.
<i>Process project information</i> may include:	<ul style="list-style-type: none"> • gather • filter • validate • disseminate • store • retrieve.
<i>Communication with clients and other stakeholders:</i>	<ul style="list-style-type: none"> • will be: <ul style="list-style-type: none"> • in a multi-disciplinary environment subject to frequent change • under limited guidance and supervision • within agreed authorisation and limits • within established organisational framework, procedures and routines • may include: <ul style="list-style-type: none"> • written reports, briefs, minutes, letters and other documentation • oral briefings, advice, conversations and telephone calls • computer-generated communications, for example electronic data transfer and internet.
<i>Others</i> may include:	<ul style="list-style-type: none"> • higher project authorities • project manager • project specialists and other personnel • team members.

Unit Sector(s)

Management and Leadership – Project Management

BSBPMG415A Apply project risk-management techniques

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Services Training Package Version 8.0</i>.</p> <p>Replaces BSBPMG407A Apply risk management techniques.</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to assist with aspects of risk management in a project. It specifically involves planning for, controlling and reviewing risks associated with the project, and assisting in this process where required.

Application of the Unit

This unit applies to a project practitioner working in a project support role.

The individual may be operating in a large or small organisation and applying skills in the context of enterprise projects.

The project practitioner may be part of a project team under the direction of a project manager, or may work as part of a smaller scale self-directed team.

This unit has generic application to a range of industries and organisations and a range of projects, from simple to complex.

In the context of this unit a project is defined as involving:

- a practical and comprehensive project plan
- a documented communications strategy
- a detailed project budget
- strategic engagement with stakeholders
- a risk, issues and change-management methodology
- a quality plan with assurance and control processes

- a supportive team-based environment.

The functions performed in project work, where formal project management methodology is not the main focus, are covered by BSBPMG522A Undertake project work.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Assist with risk analysis and planning	1.1 Contribute to identifying and prioritising potential risks throughout the project life cycle, using established <i>risk-analysis methods</i> , techniques and tools 1.2 Contribute to developing <i>risk-management strategies</i> and <i>risk-management plans</i> according to established guidelines 1.3 Contribute to developing and implementing risk-reporting mechanisms
2. Perform risk-control activities	2.1 <i>Monitor risks</i> according to agreed project and risk-management plans and advise project manager of changing circumstances 2.2 Regularly review progress and future activity for the purpose of

	<p>identifying potential and actual risks and opportunities</p> <p>2.3 Contribute to implementing agreed risk-management approaches and amending plans to reflect the changing environment</p> <p>2.4 Contribute to corrective action on risks according to the risk-management plan and delegated authority</p> <p>2.5 Contribute to the review of contingency plans on an ongoing basis and, where required, ensure tasks allocated to individuals and/or team are clarified with the project manager before implementation</p> <p>2.6 Apply and monitor risk-contingency measures according to the risk-management plan</p> <p>2.7 Identify and report opportunities in the same way as risks</p>
3. Contribute to assessing risk-management outcomes	<p>3.1 Contribute to the ongoing review of project outcomes to determine the effectiveness of risk-management activities by accessing project risk records and other available information</p> <p>3.2 Report risk-management issues and responses to others for lessons learned or application to future projects</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and teamwork skills to contribute to collective processes for risk management
- initiative and enterprise skills to think laterally about risks and how they may occur
- planning, organising and analytical skills to assist with risk analysis, risk-management planning and review of risk-management outcomes.

Required knowledge

- risk-management methods and standards
- risk-management processes.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • applying risk-management techniques in relation to workplace projects • knowledge of risk-management methods, techniques and tools.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • examples of project-management documentation for risk management.
Method of assessment	<p>A range of assessment methods should be used to assess practical skill and knowledge. The following assessment methods are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate • analysis of responses addressing case studies and scenarios that present issues and problems in project risk management • oral or written questioning to assess knowledge of strategies for managing project risk and their application to different situations • review of risk-analysis methods, techniques and tools • review of risk-management plans • evaluation of reporting of risk-management issues and responses.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Risk-analysis methods</i> may include:	<ul style="list-style-type: none"> • risk categorisation • risk data quality assessment • risk likelihood and consequence ranking • risk urgency assessment.
<i>Risk-management strategies</i> may include:	<ul style="list-style-type: none"> • accepting some or all of the consequences of a particular risk • avoiding the risk • mitigating the likelihood of the risk • sharing risk with another party • transferring risk to another party.
<i>Risk-management plans</i> may include:	<ul style="list-style-type: none"> • definitions of risk likelihood and consequence • identified risks • methodologies • risk categories and priorities • risk context for project • roles and responsibilities in regard to risk management • stakeholder tolerances • tools for determining risk rank and priority • tracking risks.
<i>Monitoring risks</i> may include:	<ul style="list-style-type: none"> • recommended corrective actions • recommended preventative actions • requested changes • reserve analysis • risk audits • risk reassessment • risk register and updates • status meetings • technical performance information • variance and trend analysis.
<i>Risk-management approaches</i> may include:	<ul style="list-style-type: none"> • risk identification • risk quantification • risk response control • risk response development.

<i>Delegated authority</i> may be:	<ul style="list-style-type: none"> • subject to frequent change in different project contexts • under limited guidance and supervision • within agreed authorisation and limits • within established organisational framework, procedures and routines.
<i>Risk-contingency measures</i> may include:	<ul style="list-style-type: none"> • alternative project plans and approaches • degree of acceptable variation • planning for risk • project planning tolerances.
<i>Opportunities</i> may include:	<ul style="list-style-type: none"> • better means of achieving a result • changes in the project or broader environment that offer scope for rescheduling activities to better effect • efficiencies or methods to work more effectively, such as ways of shortening an activity • initial project activities that reveal entirely different sets of priorities, for example product development, research and policy development • responses to changing commercial or competitive conditions.
<i>Risk records</i> may include:	<ul style="list-style-type: none"> • lists of potential risk events • project and/or organisation files and records • risk analysis and reappraisal • risk diaries, risk registers, incident logs, occurrence reports and other such documentation • risk-management lessons learned • risk-management plan.

Unit Sector(s)

Management and Leadership – Project Management

BSBPMG416A Apply project procurement procedures

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Services Training Package Version 8.0</i>.</p> <p>Replaces BSBPMG408A Apply contract and procurement procedures.</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to assist with procurement for a project. It involves identifying procurement requirements, assisting with supplier selection, conducting procurement activities, and assisting with procurement finalisation activities for the project.

Application of the Unit

This unit applies to a project practitioner working in a project support role.

The individual may be operating in a large or small organisation and applying skills in the context of enterprise projects.

The project practitioner may be part of a project team under the direction of a project manager, or may work as part of a smaller scale self-directed team.

This unit has generic application to a range of industries and organisations and a range of projects, from simple to complex.

In the context of this unit a project is defined as involving:

- a practical and comprehensive project plan
- a documented communications strategy
- a detailed project budget
- strategic engagement with stakeholders

- a risk, issues and change-management methodology
- a quality plan with assurance and control processes
- a supportive team-based environment.

The functions performed in project work, where formal project management methodology is not the main focus, are covered by BSBPMG522A Undertake project work.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Assist with procurement planning	1.1 Contribute to establishing <i>procurement requirements</i> to achieve project objectives 1.2 Act under <i>delegated authority</i> to contribute to the development of the <i>procurement-management plan</i> 1.3 Contribute to developing <i>procurement documentation</i>
2. Contribute to supplier selection process	2.1 Gather and evaluate information on potential <i>suppliers</i> 2.2 Make recommendations to assist in selection of preferred

	<p>suppliers</p> <p>2.3 Contribute to establishing agreed terms and conditions with preferred suppliers</p> <p>2.4 Identify and act in line with <i>probity and project governance constraints</i></p> <p>2.5 Assist in developing <i>contractual documentation</i></p>
3. Conduct procurement activities	<p>3.1 Test and accept supplies to ensure quality and suitability for purpose</p> <p>3.2 Undertake <i>procurement activities</i> and maintain information in line with reporting, confidentiality and audit requirements</p> <p>3.3 Receive, reconcile and register supplies according to established procedures</p> <p>3.4 Monitor and control suppliers according to contractual supply documentation</p>
4. Assist in finalising procurement activities	<p>4.1 Assist in finalising procurement agreements</p> <p>4.2 Assist in the review of project outcomes using available records to determine the effectiveness of procurement activities</p> <p>4.3 Contribute to identifying lessons learned and possible improvements to procurement management</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- interpersonal skills to communicate effectively with contractors and suppliers about contract performance and obligations
- literacy skills to read and interpret contracts and procurement documentation
- numeracy skills to calculate and confirm procurement specifications
- planning and organising skills to participate in contract and procurement management.

Required knowledge

- broad legal contractual obligations of each party to supply arrangement

- procurement-management policy, processes and procedures as applied to project management
- project procurement-management tools and techniques
- types of supply contracts.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • identifying procurement requirements in relation to a workplace project • applying procurement-management procedures in relation to a workplace project.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • examples of project procurement documentation • records of project team participation in procurement tasks and activities.
Method of assessment	<p>A range of assessment methods should be used to assess practical skill and knowledge. The following assessment methods are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate • analysis of responses addressing different case studies and scenarios that present issues and problems in project procurement • oral or written questioning to assess knowledge of strategies for project procurement and contracting, and their application to different situations • review of procurement and contract-management plans and other documentation associated with procurement processes • evaluation of information gathered on potential suppliers • assessment of recommendations made to assist in selecting

	<p>preferred contractors</p> <ul style="list-style-type: none"> assessment of reports produced about contracting and procurement-management issues.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Procurement requirements</i> may include:	<ul style="list-style-type: none"> product and service definitions quality specifications resource identification supply and delivery requirements supply and engagement metrics, including: <ul style="list-style-type: none"> employment equity environmental intellectual property legal licences, permits and certifications security work health and safety (WHS) work breakdown structure.
<i>Delegated authority</i> may be:	<ul style="list-style-type: none"> subject to frequent change in a multi-disciplinary environment under limited guidance and supervision within agreed authorisation and limits within established organisational framework, procedures and routines.
<i>Procurement-management plan</i> may include:	<ul style="list-style-type: none"> acquisition criteria contract administration contract closure processes general conditions of contract organisational procurement policy and procedures preferred suppliers

	<ul style="list-style-type: none"> • procurement-management processes • procurement statements of work • product and quality specifications • project resource requirements • supplier selection criteria • statement of works • type of supply and contract arrangements.
Procurement documentation may include:	<ul style="list-style-type: none"> • assets and disposal actions • lists of suppliers • procurement logs and registers • procurement reports • quotes, invoices and receipts • records of contract planning, formation, negotiation and administration • test and acceptance results.
Suppliers may include:	<ul style="list-style-type: none"> • consultant • contractor • subcontractor • vendor.
Probity and project governance constraints may include:	<ul style="list-style-type: none"> • ethical behaviours • limits of authority • organisational policy and procedures • prescribed decision escalation.
Contractual documentation may include:	<ul style="list-style-type: none"> • terms and conditions of contract • type of supply contract: <ul style="list-style-type: none"> • cost plus • fixed price contract • good and services quotation • time and material.
Procurement activities may include:	<ul style="list-style-type: none"> • audit of environmentally sustainable supply practices • collaborating with agencies and alliances • conducting transfer and disposal actions • confirming details and obtaining additional information about quotes • formally receipting goods and services • identifying WHS issues • liaising with client, contractors, subcontractors and other stakeholders • maintaining registers and lists • obtaining approvals • obtaining quotes from potential suppliers

	<ul style="list-style-type: none">• planning, specifying and/or conducting test and acceptance procedures• processing payment documentation• providing formal notice of delivery of goods and services• providing quotes to potential clients.
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Unit Sector(s)

Management and Leadership – Project Management

BSBPMG522A Undertake project work

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Services Training Package Version 8.0</i>.</p> <p>Replaces BSBPMG510A Manage projects.</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to undertake a straightforward project or a section of a larger project. This unit addresses the management of projects, including developing a project plan, administering and monitoring the project, finalising the project, and reviewing the project to identify lessons learned for application to future projects.

Application of the Unit

The unit focuses on the application of project-management skills and the requirement to meet timelines, quality standards, budgetary limits and other requirements set for the project.

The unit does not apply to specialist project managers. For specialist project managers, the other units of competency in the project management field (BSBPMG) will be applicable.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Define project	1.1 Access <i>project scope and other relevant documentation</i> 1.2 Define project stakeholders 1.3 Seek clarification from <i>delegating authority</i> of issues related to project and <i>project parameters</i> 1.4 Identify limits of own responsibility and reporting requirements 1.5 Clarify relationship of project to other projects and to the organisation's objectives 1.6 Determine and access available resources to undertake project
2. Develop project plan	2.1 Develop <i>project plan</i> in line with the project parameters 2.2 Identify and access appropriate <i>project-management tools</i> 2.3 Formulate risk-management plan for project, including work health and safety (WHS) 2.4 Develop and approve project budget 2.5 Consult team members and take their views into account in planning the project 2.6 Finalise project plan and gain necessary approvals to commence project according to documented plan
3. Administer and monitor project	3.1 Take action to ensure project team members are clear about their responsibilities and the project requirements 3.2 Provide <i>support for project team members</i> , especially with regard to specific needs, to ensure that the quality of the expected outcomes of the project and documented time lines are met 3.3 Establish and maintain <i>required record-keeping systems</i> throughout the project 3.4 Implement and monitor plans for managing project finances,

	<p>resources and quality</p> <p>3.5 Complete and forward project reports as required to stakeholders</p> <p>3.6 Undertake risk management as required to ensure project outcomes are met</p> <p>3.7 Achieve project deliverables</p>
4. Finalise project	<p>4.1 Complete financial record keeping associated with project and check for accuracy</p> <p>4.2 Ensure transition of staff involved in project to new roles or reassignment to previous roles</p> <p>4.3 Complete project documentation and obtain necessary sign-offs for concluding project</p>
5. Review project	<p>5.1 Review project outcomes and processes against the project scope and plan</p> <p>5.2 Involve team members in the project review</p> <p>5.3 Document lessons learned from the project and report within the organisation</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and negotiation skills to work with team members and other stakeholders to maintain project schedules
- communication skills to relate to people with diverse abilities and from diverse backgrounds in a culturally appropriate way
- literacy skills to read, write and review a range of documentation
- numeracy skills to:
 - analyse data
 - compare time lines and promotional costs against budgets
- planning and organising skills to develop, monitor and maintain implementation schedules.

Required knowledge

- organisation's mission, goals, objectives and operations and how the project relates to them
- organisational structure, and lines of authority and communication in the organisation
- relevant legislation and codes from all levels of government that may affect aspects of business operations, including:
 - anti-discrimination legislation
 - codes of practice
 - environmental issues
 - ethical principles
 - WHS
 - privacy laws.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • developing a project plan • examples of monitoring arrangements and evaluation of the efficacy of the project plan in addressing project time lines and budget • knowledge of relevant legislation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to workplace project documentation • demonstration of all required skills, knowledge and performance in a workplace-based project.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate • observation of presentations

	<ul style="list-style-type: none"> oral or written questioning to assess knowledge of the organisation's mission, goals, objectives and operations and how the project relates to them review of project risk-management plan and project plan evaluation of project reports forwarded to stakeholders analysis of documentation reviewing project outcomes and processes against the project scope and plan evaluation of documentation outlining lessons learned from the project.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other project management units.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Project scope and other relevant documentation</i> may include:	<ul style="list-style-type: none"> contract or other agreement project brief project plan or summary other documents outlining: <ul style="list-style-type: none"> expected outcomes of the project inclusions and exclusions from project project resources quality standards for project timeframes for project.
<i>Stakeholders</i> may include:	<ul style="list-style-type: none"> clients or customers (internal and external) funding bodies management, employees and relevant key personnel (internal and external) with special responsibilities project sponsor.
<i>Delegating authority</i> may include:	<ul style="list-style-type: none"> customer or client funding body manager or management representative

	<ul style="list-style-type: none"> • project sponsor.
Project parameters may include:	<ul style="list-style-type: none"> • project finances or budget • integration of project within organisation • legislative and quality standards • physical, human and technical resources available or required for project • procurement requirements associated with project • reporting requirements • risks associated with project, including WHS • scope of project • time lines.
Project plan may include:	<ul style="list-style-type: none"> • details of how the project will be managed • roles and responsibilities • time lines • work breakdown structure.
Project management tools may include:	<ul style="list-style-type: none"> • cost schedule control system • Critical Path Method • Gantt and bar charts • life cycle cost analysis • logistics support analysis • PERT charts • project management software • risk and issues logs • spreadsheets • technical resources required for the project, for example WHS management-system tools.
Support for project team members may include:	<ul style="list-style-type: none"> • additional physical, human and technical resources (within allocated budget) if and as required • encouragement • feedback • learning and development • regular project team meetings • supervision, mentoring and coaching.
Required record-keeping systems may include systems for:	<ul style="list-style-type: none"> • correspondence • financial data, including costs, expenditure, income generated and purchases • project outcomes • quality data, including any test results • recording of time spent on project and progress in completing project • samples, prototypes and models.

Resources may include:	<ul style="list-style-type: none"> • human • physical • technical.
Risk management may include:	<ul style="list-style-type: none"> • changing roles and responsibilities in project team • negotiating an extension of deadline, or redefining completion or quantity or quality of outcomes • outsourcing some aspects of the project • reducing costs • researching and applying more efficient methods for completing project tasks • seeking further resources to meet deadline • sharing ideas to gain improvements to work undertaken in the project.
Necessary sign-offs may be required by:	<ul style="list-style-type: none"> • clients • funding body • management • project sponsor.

Unit Sector(s)

Management and Leadership – Project Management

BSBREL701A Develop and cultivate collaborative partnerships and relationships

Modification History

Not applicable.

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit describes the performance outcomes, skills and knowledge required to establish collaborative partnerships and relationships with business and industry stakeholders to promote and advance learning programs.</p> <p>The unit also covers communicating to influence others, cultivating new and existing partnerships, establishing positive collaborative relationships, leading the establishment of a partnership program and establishing reporting mechanisms.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>This unit applies to leaders or managers working in either an educational organisation or a non educational enterprise where learning is used to build capabilities. It includes forming partnerships or other collaborative arrangements to achieve improved learner, community, career, or work outcomes.</p> <p>Educational leaders gain the respect of colleagues, contacts, clients and the community through demonstrating professionalism in all aspects of their work; this professionalism is underpinned by their educational expertise and effective interpersonal and communication skills. In the vocational education and training sector, learning leaders and managers must build partnerships and lead in a collaborative manner to ensure learning has a strategic role in the ever changing context, and in the face of complex influences that affect learning.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Communicate to influence relevant individuals and stakeholders	<p>1.1. Generate trust, confidence and support from <i>relevant individuals</i>, other <i>stakeholders</i> and <i>potential learners</i> by demonstrating a high standard of personal performance and conduct</p> <p>1.2. Implement <i>communication strategies</i> to represent the organisation positively to media, local community and stakeholders</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>1.3. Make decisions in consultation with relevant stakeholders and relevant individuals where appropriate</p> <p>1.4. Use a range of <i>influencing strategies</i> to increase commitment from staff and stakeholders to achieve organisational requirements and to contribute to desired culture</p> <p>1.5. Undertake selected community and/or professional engagements that project a positive image of the organisation to the broader community and stakeholders</p>
2. Cultivate new and existing partnerships with stakeholders	<p>2.1. Establish outcomes to be achieved from a learning <i>partnership</i></p> <p>2.2. Analyse models for effective consultation and collaboration within a partnership</p> <p>2.3. Cultivate <i>collaborative communities</i> and partnerships through application of a range of learning and communication solutions</p> <p>2.4. Forge relationships, collaborative communities or partnerships between a <i>training and assessment organisation</i> and a <i>public or private sector enterprise</i></p> <p>2.5. Consult stakeholders to establish vocational education and training <i>partnership learning programs</i></p>
3. Establish positive collaborative relationships	<p>3.1. Establish processes that contribute to the creation and maintenance of a positive culture that embraces collaboration</p> <p>3.2. Establish processes to <i>resolve conflict in a fair, equitable and collaborative manner</i></p> <p>3.3. Organise and allocate work activities in a cost effective and equitable manner with clear, quantifiable and agreed <i>performance standards</i></p> <p>3.4. Encourage staff to embrace a learning culture and to undertake activities that develop their personal competence and performance</p> <p>3.5. Empower individuals to develop their own ways of working within agreed boundaries of competence, cultural, <i>diversity</i> and <i>organisational and legal requirements</i></p> <p>3.6. Establish <i>indicators</i> and <i>feedback processes</i> that can be used to evaluate the health of the work environment</p>

ELEMENT	PERFORMANCE CRITERIA
4. Lead establishment of a partnership program	4.1. Identify and address <i>relevant organisational policies and procedures</i> in partnership learning program plans 4.2. Identify and incorporate relevant legal requirements into planning of learning programs established in a community or partnership setting 4.3. Form partnership learning programs in collaborative and consultative processes involving public or private sector enterprises 4.4. Plan and allocate <i>resource requirements</i> to accomplish a partnership learning program 4.5. Establish relevant organisational policies and procedures relating to partnerships, and training and assessment services
5. Establish reporting mechanisms for partnership program	5.1. Establish <i>reporting systems</i> for <i>reporting results</i> , that meet <i>reporting requirements</i> , against planned partnership outcomes 5.2. Implement <i>reporting systems</i> to map learner progress against partnership outcomes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analysis and interpretation skills to:
 - evaluate organisational information management systems, policies and procedures
 - select relevant evaluation information and documentation
 - identify any potential and current non-compliance
 - access and interpret organisation's standards and values
 - analyse records or notes of the evaluation process
- initiative and enterprise skills to establish collaborative partnerships and relationships
- interpersonal and communication skills to negotiate, to question, to listen and investigate, to network and clarify issues
- planning and organising skills to:
 - research and evaluate validation processes, and to determine and implement

REQUIRED SKILLS AND KNOWLEDGE

improvements to these processes

- develop and establish agreement to plans
- problem-solving skills to review feedback and to plan improvements
- teamwork skills to lead and motivate a team in establishing productive networks, partnerships and other relationships.

Required knowledge

- relevant legislation that affects the business operation, especially in regard to OHS and environmental issues, equal opportunity and anti-discrimination, industrial relations
- organisation mission, purpose and values
- organisation objectives, plans and strategies
- leadership styles
- personal development planning methodologies
- data collection methods
- external environment scanning relating to social, political, economic and technological developments
- emotional intelligence and its relationship to individual and team effectiveness
- organisational transformation and the management of the stages of change
- organisational design and building in responsiveness of operations to change in customer or market conditions.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- demonstrated capacity to foster learning partnerships, conduct stakeholder consultation and use strategic and personally enhancing communication skills
- developing collaborative approaches to enhance individual, team and organisational outcomes
- initiating and implementing learning program partnerships in line with relevant regulatory, employment and organisational requirements

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> knowledge of relevant policy, legislation, codes of practice and national standards.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> competence is consistently demonstrated over time, and over a range and variety of situations access to required assessment facilities and resources.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate review of applied projects or learning activities, especially relating to formation of professional networks and stakeholder consultation in relation to forming partnerships for vocational education and training programs direct observation of contextual application of skills submission of a portfolio of evidence including previous work forging partnerships oral or written questioning to assess knowledge of development of industry learning partnerships.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> BSBLED702A Lead learning strategy implementation BSBLED707A Establish career development services BSBLED709A Identify and communicate trends in career development PSPMNGT614A Facilitate knowledge management.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating

RANGE STATEMENT	
conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Relevant individuals may include:	<ul style="list-style-type: none"> • employees • employers • government agencies and departments • learners/students • industry associations, employer bodies, professional associations • industry representatives • national Industry Skills Councils • people working in the roles targeted by training • regulatory and licensing authorities • research agencies • state/territory industry training advisory bodies • subject or technical specialists or experts • unions • universities
Stakeholders may include:	<ul style="list-style-type: none"> • administrative and regulatory bodies • coordinators, teachers, assessors, coaches, mentors and support staff • employees • industry, employee, employer, professional and peak bodies or associations • learners/students • other training and assessment organisations • public or private sector enterprise
Potential learners may include:	<ul style="list-style-type: none"> • apprentices and trainees • current or ongoing learners and clients • existing industry and enterprise employees • individuals changing careers • individuals learning new skills and knowledge • individuals or groups meeting licensing or other regulatory requirements • individuals seeking to upgrade competencies • individuals who are unemployed • individuals who have a disability • members of target groups such as Aboriginal and Torres Strait Islander communities

RANGE STATEMENT	
	<ul style="list-style-type: none"> • overseas learners and international students • potential learners and clients • recent migrants and people from culturally and linguistically diverse backgrounds • school leavers, new entrants to the workforce
<i>Communication strategies</i> may include:	<ul style="list-style-type: none"> • conducting presentations • developing and applying interview and interpersonal communication protocols • developing and circulating marketing materials • developing promotional materials and course outlines • initiating and conducting a public communication strategy
<i>Influencing strategies</i> may include:	<ul style="list-style-type: none"> • debate • dialogue • discussion • formal and informal techniques • levels of participation • moderated negotiations • networking • strategies applied face-to-face or collectively (e.g. in a learning community or community of practice)
<i>Partnerships</i> may:	<ul style="list-style-type: none"> • be informal • be physical or virtual (e.g. online) • involve a formal agreement • involve one or more enterprises, and training and assessment organisations • involve one or more learning programs
<i>Collaborative communities</i> may include:	<ul style="list-style-type: none"> • communities of practice • formal or informal relationships • informal and formal groups in collaborative relationships • knowledge communities • knowledge networks • learning communities • physical or virtual relationships • supply chain communities • virtual circles
<i>Training and assessment</i>	<ul style="list-style-type: none"> • organisation that delivers non-recognised vocational education and training

RANGE STATEMENT	
<i>organisation</i> may include:	<ul style="list-style-type: none"> • organisation working in a partnership arrangement with an RTO to deliver recognised vocational education and training • RTO delivering recognised vocational education and training services such as TAFE institutes, private commercial colleges and organisations, enterprises, community organisations, group training companies and secondary schools
<i>Public or private sector enterprises</i> may include:	<ul style="list-style-type: none"> • community bodies • government agencies • privately owned companies
<i>Partnership learning program</i> may include:	<ul style="list-style-type: none"> • accredited course which includes Training Package outcomes • community education program • nationally endorsed qualification from a Training Package or accredited course • part of a VET in Schools program • part of an apprenticeship or traineeship • professional development program • short course or non-recognised vocational program • short-term development plan • short-term induction program • subset of a learning strategy • traineeship or apprenticeship • workplace learning program
<i>Resolving conflict in a fair, equitable and collaborative manner</i> may include:	<ul style="list-style-type: none"> • adherence to relevant legislative, legal, workplace requirements • application of organisational complaints procedures • internal or external specialists
<i>Performance standards</i> may be based on:	<ul style="list-style-type: none"> • personal or task outcomes • span short- or long-term outcomes • strategic, operational outcomes
<i>Diversity</i> includes difference in:	<ul style="list-style-type: none"> • age • belief systems and values • culture • expertise, experience and working styles • gender • interpersonal style

RANGE STATEMENT	
	<ul style="list-style-type: none"> • interests • language, literacy and numeracy • physical differences • politics • race • religion • sexual orientation • thinking and learning styles
<i>Organisational and legal requirements</i> may include:	<ul style="list-style-type: none"> • collaborative and partnership arrangement agreements such as memoranda of understanding • confidentiality and privacy requirements • licensing requirements • requirements for initial and continuing registration as defined in the AQTF Standards for Registered Training Organisations and state/territory legislation and regulations governing provider registration and course accreditation • requirements of awards and enterprise bargaining agreements • requirements of endorsed Training Packages • requirements of other relevant commonwealth and state/territory legislation, for example relating to matters such as OHS, anti-discrimination, workplace and industrial relations, workers compensation, apprenticeships and traineeships • requirements set by professional associations • requirements set by quality systems
<i>Indicators</i> may include:	<ul style="list-style-type: none"> • formal human resources and related indicators to provide benchmark, comparative measures on: <ul style="list-style-type: none"> • average hours in relation to output per employee • down-time • related operational and planning indicators • revenue per employee/team • staff absenteeism • staff satisfaction • staff turnover

RANGE STATEMENT	
	<ul style="list-style-type: none"> • training hours
<i>Feedback processes</i> include:	<ul style="list-style-type: none"> • formal complaints or suggestions procedures • formal-informal • independent audits • management audits/workplace checks • surveys • virtual or physical • whistleblower policy
<i>Relevant organisational policies and procedures</i> may include:	<ul style="list-style-type: none"> • access and equity • assessment procedures and options • client services • confidentiality requirements • ethical standards • fees and payment schedule • grievance and appeals processes • learner selection, enrolment, induction and orientation procedures • mutual recognition obligations • policies and procedures being available to all personnel, learners, clients and candidates • staff recruitment, induction and ongoing development and monitoring • support services available • human resources policies and procedures and legal requirements including anti-discrimination, equal employment, OHS • administrative and records management systems, for example that relating to: <ul style="list-style-type: none"> • contract manager • document version control • maintenance, retention, archiving, retrieval, storage and security of training and assessment information and records • personnel responsible for analysing statistics and data to ensure organisation complies with relevant standards across all of its operations and training and assessment activities • privacy and access to training and assessment information and records • reporting and recording requirements and

RANGE STATEMENT	
	<p>arrangements</p> <ul style="list-style-type: none"> • supervisors and managers • union and employee representatives • users of training information such as finance personnel, human resources personnel, employers
<i>Resource requirements</i> may include:	<ul style="list-style-type: none"> • additional staff • distribution costs • equipment • production costs • promotional costs • research and development • re-tooling • staff training
<i>Reporting systems</i> for reporting results may include:	<ul style="list-style-type: none"> • arrangements for the issuing of Australian Qualifications Framework (AQF) qualifications and Statements of Attainment • arrangements for recognising and recording current competencies • electronic student management system which complies with AVETMISS or other reporting or statistical collection requirements • internal organisational recording and reporting systems • record keeping policies and procedures
<i>Reporting results</i> may include:	<ul style="list-style-type: none"> • Australian Apprenticeship Centre forms and letters such as for incentives and completions • availability of all reports and records for audit and monitoring purposes • enrolment forms • financial reporting for funding and payments from funding body • OHS incident reporting systems • performance agreements • reporting for apprenticeship and traineeship program delivery • reporting for in-house or internal program delivery • Training Contract and RTO notifications
<i>Reporting requirements</i> may include those specified in:	<ul style="list-style-type: none"> • AQTF Standards for Registered Training Organisations

RANGE STATEMENT	
	<ul style="list-style-type: none"> • AVETMISS process documentation • organisational documentation
<p><i>Reporting systems</i> to map learner progress against partnership outcomes may include:</p>	<ul style="list-style-type: none"> • electronic systems including those using business technology such as: <ul style="list-style-type: none"> • computers • hardware • software • telephone networks • physical systems such as face-to-face and print communications

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Stakeholder Relations - Relationship Management
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Co-requisite units

Co-requisite units	

BSBRES401A Analyse and present research information

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to gather, organise and present workplace information using available systems.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are required to apply their broad knowledge of the work environment to analysis and research tasks. They may have responsibility to provide guidance or to delegate aspects of these tasks to others.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Gather and organise information	<p>1.1. Gather and organise <i>information</i> in a format suitable for analysis, interpretation and dissemination in accordance with <i>organisational requirements</i></p> <p>1.2. Access information held by the organisation ensuring accuracy and relevance in line with established organisational requirements</p> <p>1.3. Ensure that <i>methods of collecting information</i> are reliable and make efficient use of resources in accordance with organisational requirements</p> <p>1.4. Identify research requirements for combining online research with non-electronic sources of information</p> <p>1.5. Use <i>business technology</i> to access, organise and monitor information in accordance with organisational requirements</p> <p>1.6. Update, modify, maintain and store information, in accordance with organisational requirements</p>
2. Research and analyse information	<p>2.1. Clearly define <i>objectives of research</i> ensuring consistency with organisational requirements</p> <p>2.2. Ensure that data and <i>research strategies</i> used are valid and relevant to the requirements of the research and make efficient use of available resources</p> <p>2.3. Identify <i>key words and phrases</i> for use as part of any online search strategy, including the use of <i>Boolean operators</i> and other search tools</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Use reliable <i>methods of data analysis</i> that are suitable to research purposes 2.5. Ensure that assumptions and conclusions used in analyses are clear, justified, supported by evidence and consistent with research and <i>business objectives</i>
3. Present information	3.1. Present recommendations and issues in an appropriate format, style and structure using suitable business technology 3.2. Structure and format reports in a clear manner that conforms to organisational requirements 3.3. Report and distribute research findings in accordance with organisational requirements 3.4. Obtain <i>feedback</i> and comments on suitability and sufficiency of findings in accordance with organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to read, write and understand a variety of texts; and to edit and proofread documents to ensure clarity of meaning, accuracy and consistency of information
- problem-solving skills to deal with information which is contradictory, ambiguous, inconsistent or inadequate
- technology skills to select and use technology appropriate to a task
- research skills to identify and access information.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- organisational record keeping/filing systems, security procedures and safe

REQUIRED SKILLS AND KNOWLEDGE

recording practices

- organisational policies and procedures relating to distribution of workplace information, and legal and ethical obligations
- research processes and strategies to identify new sources (online and print) of information and to use them most efficiently and effectively.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- presenting information and data
- maintaining and handling data and documents systematically
- analysing and interpreting data to support organisational activities
- knowledge of research processes and strategies to identify new sources of information.

Context of and specific resources for assessment

Assessment must ensure:

- access to an actual workplace or simulated environment
- access to office equipment and resources
- examples of research tasks and resources.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- analysis of responses to case studies and scenarios
- demonstration of techniques
- observation of presentations
- review of documentation outlining recommendations and issues

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • review of reports outlining research findings.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • general administration units • IT use units • Governance units

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Information</i> may include:	<ul style="list-style-type: none"> • demographic data • service delivery records • computer databases (library catalogue, customer records, subscription database, internet) • computer files (letters, memos and other documents) • correspondence (faxes, memos, letters, email) • financial figures • forms (insurance forms, membership forms) • information on training needs • invoices (from suppliers, to debtors) • marketing reports/plans/budgets • personnel records (personal details, salary rates) • production targets • sales records (monthly forecasts, targets achieved)
<i>Organisational requirements</i> may include:	<ul style="list-style-type: none"> • anti-discrimination and related policy • business and performance plans • Code of Conduct/Code of Ethics

RANGE STATEMENT	
	<ul style="list-style-type: none"> • defined resource parameters • ethical standards • goals, objectives, plans, systems and processes • information protocols • legal and organisational policies, guidelines and requirements • management and accountability channels • OHS policies, procedures and programs • procedures for updating records • quality assurance and/or procedures manuals • security and confidentiality requirements
Methods of collecting information may include:	<ul style="list-style-type: none"> • checking research provided by others • checking written material including referrals and client files • individual research • information from other organisations • interviews with community members, colleagues/customers • observation and listening • previous file records • questioning (in person or indirect) • recruitment applications and other forms
Business technology may include:	<ul style="list-style-type: none"> • answering machine • computer • fax machine • photocopier • telephone
Objectives of research may include:	<ul style="list-style-type: none"> • comparative analysis • hypothesis testing • identification of trends • industry pricing policies • process mapping • situational diagnosis
Research strategies may include:	<ul style="list-style-type: none"> • data analysis • documentation reviews • focus groups • interviewing colleagues and clients • online searching • product sampling • subscription databases

RANGE STATEMENT	
<i>Key words and phrases</i> may include:	<ul style="list-style-type: none"> • American spellings when searching online • cultural or geographic terms • using different thesauri in different databases
<i>Boolean operators</i> may include:	<ul style="list-style-type: none"> • exclude - / NOT • include + / AND • or • phrase searching " "() • variations, depending on the resource being used
<i>Methods of data analysis</i> may include:	<ul style="list-style-type: none"> • data sampling • feedback on results • peer review • review of previous research • statistical analysis
<i>Business objectives</i> may include:	<ul style="list-style-type: none"> • community capacity building • community development • service provision • business planning • financial performance • flexibility, responsiveness • interpersonal communication • marketing and customer service • organisational values and behaviours • people management • work procedures and quality assurance manuals
<i>Feedback</i> may include:	<ul style="list-style-type: none"> • audit documentation and reports • comments from community, board members, clients and colleagues • customer satisfaction questionnaires • quality assurance data • returned goods

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Knowledge Management - Research
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Co-requisite units

Co-requisite units		

BSBRES801A Initiate and lead applied research

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to plan, conduct and report on applied research to influence strategic practices and outcomes within an organisational context.</p> <p>The unit also covers constructing an applied research strategy, using a range of applied research techniques, and analysing and presenting findings.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to leaders or managers using applied research to ensure learning can enhance individual, team and organisational performance.</p> <p>The intended purpose and approach to applied research may vary across a range of contexts and organisations. In this unit, the focus is on applied research to attain improved organisational outcomes. It involves leading a range research activities and techniques that, in combination, can provide quality information to enhance learning related activities and the development of capabilities.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Construct an applied research strategy	1.1. Clarify and confirm <i>applied research purpose</i> and needs of the <i>target group</i> 1.2. Determine policies and procedures in relation to conducting applied research 1.3. Establish mechanisms for collecting and maintaining data in a systematic manner 1.4. Analyse <i>factors affecting the reliability and validity of data</i> 1.5. Review relevant research ethics and codes of conduct 1.6. Prepare <i>applied research strategy</i> and <i>hypothesis</i> 1.7. Frame a research strategy in consideration of available <i>tools</i> and <i>resources</i>

ELEMENT	PERFORMANCE CRITERIA
2. Use a range of applied research techniques	2.1. Review and evaluate a range of <i>applied research methods, theories</i> and <i>data collection techniques</i> 2.2. Select appropriate methods to gather and analyse data 2.3. Use, as appropriate, <i>suitable technology</i> and technology services to support data collection and analysis 2.4. Access <i>appropriate sources of information</i> and <i>contributors</i> relevant to the research 2.5. Optimise <i>relevance of the research</i> through integrity of the data collected and analysis tools used
3. Analyse and present findings	3.1. Evaluate how research findings such as trends and changes will impact on learning strategy 3.2. Review data and research findings for accuracy of details and adherence to any <i>legal requirements</i> 3.3. Collate and analyse data for relevance against the original applied research strategy 3.4. Document and <i>present research findings</i> in a clear and logical manner consistent with audience needs 3.5. Identify the need for and an appropriate approach to, further research

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication and teamwork skills to:
 - analyse and interpret structurally intricate information in the area being researched
 - consult with target groups using a range of communication techniques
 - develop written texts which deal with complex ideas and concepts
 - present research results creatively to meet audience needs
- initiative and enterprise skills to discover and source appropriate information, and to identify future implication of information and data collected
- planning and organising skills to:
 - construct an applied research strategy

REQUIRED SKILLS AND KNOWLEDGE

- initiate and design research methodology
- manage an applied research project
- frame research strategy in consideration of available resources
- problem-solving skills to:
 - develop and examine the validity of the hypothesis using a range of applied research techniques
 - collect, organise, analyse and present data
 - analyse research
 - check the integrity of data collected
 - conduct trend analyses
- self-management and learning skills to:
 - manage own time and determine priorities
 - review and adhere to relevant ethics and codes of conduct
 - store data to maintain privacy and confidentiality of information
 - conduct research to develop capabilities and learning related activities
- technical skills to:
 - select suitable technology and technical services
 - use a range of software programs
 - use technology and the internet to discover, access, collect and store data, information and research in a systematic manner.

Required knowledge

- communication processes and methods
- data collection methods
- legislation, regulations, policies, procedures and guidelines relating to handling or storing data, including privacy and freedom of information
- presentation techniques
- reporting methods
- research ethics and codes of conduct
- research tools and methods
- selection of appropriate applied research techniques.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

EVIDENCE GUIDE	
Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • formulating a research proposal or plan which includes: <ul style="list-style-type: none"> • specific research questions or hypotheses • valid population or sample size • description of the geographical, cultural, social or institutional context within which the research will be carried out • full description of the data collection methods • analysis of the limitations to research design • designing an applied research project using appropriate tools and techniques • research report with analysis of data, and valid and reliable findings • utility and relevance of the research results • knowledge of applied research techniques.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • research activity relates to an actual workplace or simulated context and topic • competence is consistently demonstrated over time, over a range of applied topics, and using a range of tools and techniques appropriate to the given situations and research topic.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • applied projects or assessment activities relating to conducting applied research • observation of contextual application of skills • oral or written questioning to assess knowledge of applied research.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended,</p>

EVIDENCE GUIDE

	<p>for example:</p> <ul style="list-style-type: none"> • BSBITB701A Implement advanced electronic technologies • BSBLED702A Lead learning strategy implementation • BSBLED703A Implement improved learning practice • BSBLED704A Review enterprise e-learning systems and solutions implementation • BSBLED709A Identify and communicate trends in career development.
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Applied research purpose</i> may be contained in documents such as:</p>	<ul style="list-style-type: none"> • agreements • research brief • research contracts • research guidelines • research statement
<p><i>Target group</i> may include:</p>	<ul style="list-style-type: none"> • age cohort • career choices • cultural background and needs • diversity • employees • employment status or role • end users • learners/students • learning styles and preferences • level of education achieved • literacy and numeracy skills • location

RANGE STATEMENT	
	<ul style="list-style-type: none"> • occupational health and safety • predetermined service user group • skill or competency profile • socioeconomic background
<i>Applied research strategy</i> may cover:	<ul style="list-style-type: none"> • analysis of industry specific trends, statistics and issues • collection of data to assist informed decision making, planning or risk management • data and information relating to strategy, policy, practices, or work processes developed and implemented by an organisation • formation of solutions to complex problems • information and analysis needed to develop a campaign, strategic plan, industry or sector plan and strategy, or to bargain effectively with employers • information and analysis to conduct a strategic or community campaign or activity • relationship or relevance of a theory, principle or practice to an immediate practical problem, issue or to test a proposed solution
<i>Factors affecting reliability and validity</i> may include:	<ul style="list-style-type: none"> • sample size • type or survey used (e.g. comparing types and methods to increase validity) • capacity to generalise findings across the whole population • access appropriate population
<i>Hypothesis</i> is:	<ul style="list-style-type: none"> • conceptual or operational proposition or explanation that will be tested through the conduct of the applied research
<i>Tools</i> may be:	<ul style="list-style-type: none"> • designed for electronic or physical presentation • involve a range of technologies (online or computer-based)
<i>Resources</i> may include:	<ul style="list-style-type: none"> • components required • design specifications • infrastructure • monetary • physical • technical manuals • samples
<i>Applied research methods and</i>	<ul style="list-style-type: none"> • methods such as:

RANGE STATEMENT	
<i>theories</i> may cover:	<ul style="list-style-type: none"> • action research • case study • classification • experience and intuition • experiments • interviews • map making • mathematical models and simulations • participant observation • physical traces analysis • semiotics • surveys • statistical data analysis • statistical surveys • ethnographic research • content, textual analysis, theories and techniques, which will vary upon consideration of: <ul style="list-style-type: none"> • application of statistical methods • causal factors and dependant or independent variables • critical analysis • experimental, quasi-experimental, non-experimental • mathematical calculations • problem solving • qualitative or quantitative research • sampling and sample size
<i>Data collection techniques</i> may include:	<ul style="list-style-type: none"> • collaboration with other experts or mentors • desk research • document research • field study • observation • physical items analysis • interviews • questionnaires • surveys
<i>Suitable technology</i> may include:	<ul style="list-style-type: none"> • communication technology and networks • databases and the use of spreadsheets, graphs,

RANGE STATEMENT	
	<p>trend and time series, and mathematical equations</p> <ul style="list-style-type: none"> • hardware and software
<p><i>Appropriate sources of information</i> may include:</p>	<ul style="list-style-type: none"> • archives • community organisations • computer data, including internet • discussions with current industry practitioners • discussions with industry personnel, manufacturers, and technical and sales personnel • government departments • industry associations and organisations • industry journals • libraries (such as text, film, video, sound, graphic) • media (such as film, television, radio, newspapers, multimedia) • media archives • museums, galleries • organisational policies, procedures and journals • personal observations and experience • professional organisations • reference books • technical publications, manuals
<p><i>Contributors</i> may include:</p>	<ul style="list-style-type: none"> • individuals and groups both inside and outside the organisation who have some direct interest or expertise in relation to the applied research or who provide data
<p><i>Relevance of the research</i> may be based on:</p>	<ul style="list-style-type: none"> • available time and resources • feasibility of implementing the recommendations • findings of previous and current research • original research parameters and brief • quality and credibility of the methodology • value of its usefulness • value of the information and data
<p><i>Legal requirements</i> may include:</p>	<ul style="list-style-type: none"> • agreements with third parties that supply research or data • competency standards • contracts • copyright and privacy laws relating to physical

RANGE STATEMENT	
	materials and electronic technology <ul style="list-style-type: none"> • licensing • plagiarism • privacy • relevant commonwealth and state/territory legislation, policy, codes of practice and national standards • security of information
<i>Presenting research findings</i> may include:	<ul style="list-style-type: none"> • circulating publications for comment and critique on the internet • contributing to strategic policy • drafting publications or reports • presentations at seminars and conferences • providing data, plans, specifications and reports resulting in changed work practice/s or design/s • providing internal reports verbally, in writing or via presentations • publishing papers and articles for expert review and audiences • publishing reports and articles for lay audiences

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Knowledge Management - Research
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Co-requisite units

Co-requisite units	
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Co-requisite units		

BSBRSK401A Identify risk and apply risk management processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to identify risks and to apply established risk management processes to a subset of an organisation or project's operations that are within the person's own work responsibilities and area of operation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals with a broad knowledge of risk analysis or project management who contribute well developed skills in creating solutions to unpredictable problems through analysis and evaluation of information from a variety of sources. They may have responsibility to provide guidance or to delegate aspects of these tasks to others.</p> <p>In this unit, risks applicable within own work responsibilities and area of operation, may include projects being undertaken individually or by a team, or operations within a section of the organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify risks	1.1. Identify the <i>context</i> for risk management 1.2. Identify <i>risks</i> using <i>tools</i> , ensuring all reasonable steps have been taken to identify all risks 1.3. Document identified risks in accordance with relevant policies, procedures and legislation
2. Analyse and evaluate risks	2.1. Analyse and document risks in consultation with relevant <i>stakeholders</i> 2.2. Undertake <i>risk categorisation</i> and determine <i>level of risk</i> 2.3. Document analysis processes and outcomes
3. Treat risks	3.1. Determine appropriate <i>control measures</i> for risks and assess for strengths and weaknesses 3.2. Identify control measures for all risks

ELEMENT	PERFORMANCE CRITERIA
	3.3.Refer risks relevant to whole of organisation or having an impact beyond own work responsibilities and area of operation to others as per established policies and procedures 3.4.Choose and implement control measures for own area of operation and/or responsibilities 3.5.Prepare and implement treatment plans
4. Monitor and review effectiveness of risk treatment/s	4.1.Regularly review implemented treatment/s against <i>measures of success</i> 4.2.Use review results to improve the treatment of risks 4.3.Provide assistance to auditing risk in own area of operation 4.4.Monitor and review management of risk in own area of operation

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills sufficient to read and understand a variety of texts; and to write, edit and proofread documents to ensure clarity of meaning, accuracy and consistency of information
- research and data collection skills to monitor and evaluate risks
- problem-solving skills to appropriately address identified risks.

Required knowledge

- Australian and international standards for risk management
- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - environmental issues
 - occupational health and safety
- organisational policies and procedures relating to risk management processes and

REQUIRED SKILLS AND KNOWLEDGE

strategies

- auditing requirements relating to risk management.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- identification, analysis and evaluation of risks
- demonstrated understanding of personal role in relation to wider organisational or project context
- demonstrated understanding of risk management processes and procedures.

Context of and specific resources for assessment

Assessment must ensure:

- access to workplace documentation relating to risk management
- access to risk management tools and frameworks.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- review of documentation outlining risk analysis processes and outcomes
- analysis of responses to case studies and scenarios
- oral or written questioning to assess knowledge of Australian and international standards for risk management
- review of implementation of treatment plans.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

EVIDENCE GUIDE

- general administration units
- other risk management units.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Context may include:

- any related projects or organisations
- any resources, including physical assets, which are vital to operations
- key operational elements and service of the organisation
- organisation or project, how it is organised and its capabilities
- own role and responsibilities in relation to overall project or organisation design

Risks may include:

- commercial and legal relationships
- economic circumstances and scenarios
- human behaviour
- individual activities
- management activities and controls
- natural events
- political circumstances
- positive risk
- technology - technological issues

Tools may include:

- documentation to assist in process of identifying risk, and assessing impact and likelihood of occurrence
- standard instruments developed for the organisation and contextualised for sections of the workplace's operations, such as checklists and testing procedures
- tools to prioritise risks, including where relevant, numerical scoring systems for risks

RANGE STATEMENT	
<i>Stakeholders</i> may include:	<ul style="list-style-type: none"> • contractors • employees • financial managers • insurance agents • managers • public • service providers • suppliers • unions • volunteers
<i>Risk categorisation</i> may include:	<ul style="list-style-type: none"> • likelihood of risks: <ul style="list-style-type: none"> • almost certain • likely • possible • unlikely • rare • consequences of risks: <ul style="list-style-type: none"> • insignificant • minor • moderate • major • catastrophic • current control measures
<i>Level of risk</i> may include:	<ul style="list-style-type: none"> • low, treated with routine procedures • moderate, with specific responsibility allocated for the risk, and monitoring and response procedures implemented • high, requiring action, as it has potential to be damaging to the organisation or project • extreme, requiring immediate action, as it has potential to be devastating to the organisation or project
<i>Control measures</i> may include:	<ul style="list-style-type: none"> • hierarchy of controls: <ul style="list-style-type: none"> • reduction in likelihood of risks • reduction of consequences of risks • retention of risks • risk aversion • transfer of responsibility of risks

RANGE STATEMENT

<i>Measures of success</i> may include:	<ul style="list-style-type: none"> • costs • reductions in impact • reductions in likelihood • reductions in occurrence
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Unit Sector(s)

Unit sector	
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Competency field

Competency field	Regulation, Licensing and Risk - Risk Management
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Co-requisite units

Co-requisite units		

BSBRSK501B Manage risk

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i>.</p> <p>Revised unit. Required knowledge updated to incorporate current Australian Standards.</p> <p>Replaces BSBRSK501A Manage risk</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to manage risks in a range of contexts across the organisation or for a specific business unit or area.

Application of the Unit

This unit addresses the management of the risk across the organisation or within a business unit or area. It does not assume any given industry setting.

This unit applies to individuals who are working in positions of authority and are approved to implement change across the organisation, business unit, program or project area. They may or may not have responsibility for directly supervising others.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Establish risk context	<p>1.1 Review organisational processes, procedures and requirements for undertaking risk management</p> <p>1.2 Determine scope for risk management process</p> <p>1.3 Identify internal and external stakeholders and their issues</p> <p>1.4 Review political, economic, social, legal, technological and policy context</p> <p>1.5 Review strengths and weaknesses of existing arrangements</p> <p>1.6 Document critical success factors, goals or objectives for area included in scope</p> <p>1.7 Obtain support for risk management activities</p> <p>1.8 Communicate with relevant parties about the risk management process and invite participation</p>
2. Identify risks	<p>2.1 Invite relevant parties to assist in the identification of risks</p> <p>2.2 Research risks that may apply to scope</p> <p>2.3 Use tools and techniques to generate a list of risks that apply to the scope, in consultation with relevant parties</p>
3. Analyse risks	<p>3.1 Assess likelihood of risks occurring</p> <p>3.2 Assess impact or consequence if risks occur</p> <p>3.3 Evaluate and prioritise risks for treatment</p>
4. Select and implement treatments	<p>4.1 Determine and select most appropriate options for treating risks</p> <p>4.2 Develop an action plan for implementing risk treatment</p> <p>4.3 Communicate risk management processes to relevant parties</p> <p>4.4 Ensure all documentation is in order and appropriately stored</p>

	4.5 Implement and monitor action plan 4.6 Evaluate risk management process
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Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and literacy skills to consult and negotiate, to prepare communications about risk management, and to encourage stakeholder involvement
- organisational and management skills to plan and implement risk management processes
- problem-solving and innovation skills to find practical ways to manage identified risks.

Required knowledge

- AS/NZS ISO 31000:2009 Risk Management - Principles and Guidelines
- legislation, codes of practice and national standards, for example:
 - duty of care
 - company law
 - contract law
 - environmental law
 - freedom of information
 - industrial relations law
 - privacy and confidentiality
 - legislation relevant to organisation's operations
 - legislation relevant to operation as a business entity
- organisational policies and procedures, including:
 - risk management strategy
 - policies and procedures for risk management
- overall operations of organisation
- reasonable adjustment in the workplace for people with a disability
- types of available insurance and insurance providers.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • risk management plan which includes a detailed stakeholder analysis, explanation of the risk context, critical success factors, identified and analysed risks, and treatments for prioritised risks • details of monitoring arrangements for risk management plan and an evaluation of the risk management plan's efficacy in treating risks • knowledge of relevant legislation, codes of practice and national standards.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to workplace documentation.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentations • oral or written questioning to assess knowledge of risk management policies and procedures • review of documented critical success factors, and goals or objectives for area • review of risks prioritised for treatment • evaluation of action plan for implementing risk treatment • evaluation of documentation communicating risk management processes to relevant parties.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • financial management units, governance units, human resource management units, or technology units.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Risks</i> may include those relating to:</p>	<ul style="list-style-type: none"> • commercial relationships • economic circumstances and scenarios • human behaviour • individual activities • legislation • management activities and controls • natural events • political circumstances • technology.
<p><i>Scope</i> may apply to:</p>	<ul style="list-style-type: none"> • given project • specific business unit or area • specific functional such as: <ul style="list-style-type: none"> • financial management • OHS • governance • external environment • internal environment • whole organisation.
<p><i>Relevant parties</i> may include:</p>	<ul style="list-style-type: none"> • all staff • internal and external stakeholders • senior management • specific teams or business units • technical experts.
<p><i>Research</i> may include:</p>	<ul style="list-style-type: none"> • data or statistical information • information from other business areas • lessons learned from other projects or activities • market research • previous experience • public consultation • review of literature and other information sources.
<p><i>Tools and techniques</i> may include:</p>	<ul style="list-style-type: none"> • brainstorming • checklists • fishbone diagrams

	<ul style="list-style-type: none"> • flowcharts • scenario analysis.
Likelihood may refer to:	<ul style="list-style-type: none"> • probability of a given risk occurring, such as: <ul style="list-style-type: none"> • very likely • likely • possible • unlikely • rare.
Impact or consequence may refer to:	<ul style="list-style-type: none"> • significance of outcomes if the risk occurs, such as: <ul style="list-style-type: none"> • disastrous • severe • moderate impact • minimal impact.
Evaluation of risks includes:	<ul style="list-style-type: none"> • considering the likelihood of the risk occurring • considering the impact of the risk • determining which risks are most significant and are therefore priorities for treatment.
Options may include:	<ul style="list-style-type: none"> • avoiding the risk • changing the consequences • changing the likelihood • retaining the risk • sharing the risk with a third party.
Action plans should include:	<ul style="list-style-type: none"> • what actions are required • who is taking responsibility • time lines • monitoring processes.

Unit Sector(s)

Management and Leadership – Management

Custom Content Section

Not applicable.

BSBSMB404A Undertake small business planning

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to research and develop an integrated business plan for achieving business goals and objectives. Specific legal requirements apply to the management of a small business.
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Application of the Unit

Application of the unit	This work is undertaken by individuals who operate a small business. This unit is suitable for micro and small businesses or a department in a larger organisation.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify elements of the business plan	1.1. Identify purpose of the <i>business plan</i> 1.2. Identify and review the essential components of the business plan 1.3. Identify and document <i>business goals and objectives</i> as a basis for measuring business performance
2. Develop a business plan	2.1. Research resources, legal and compliance requirements, specifically in relation to <i>occupational health and safety (OHS)</i> , in accordance with business goals and objectives 2.2. Research market needs, and market size and potential 2.3. Identify sources and costs of finance, from the <i>financial plan</i> , to provide required liquidity and profitability for the business 2.4. Identify methods, from the <i>marketing strategies</i> , to promote the market exposure of the business 2.5. Identify methods/means of production/operation from the <i>production/operations plan</i> to conform with business goals and objectives 2.6. Identify <i>staffing requirements</i> to effectively produce/deliver products/services 2.7. Identify <i>specialist services</i> and sources of advice, where required, and cost in accordance with resources available
3. Develop strategies for minimising risks	3.1. Identify specific interests and objectives of <i>relevant people</i> and seek and confirm their support of the planned business direction 3.2. Identify and develop <i>risk management strategies</i>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to business goals and objectives, and relevant legal requirements</p> <p>3.3.Develop <i>contingency plan</i> to address possible areas of non-conformance with the plan</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to assess business performance
- literacy skills to enable interpretation of business information
- numeracy skills to analyse data.

Required knowledge

- commonwealth, state/territory and local government legislative requirements relating to business operation, especially in regard to OHS and environmental issues, equal employment opportunity, industrial relations and anti-discrimination
- methods of evaluation
- OHS responsibilities and procedures for identifying hazards relevant to the business
- planning processes
- preparation of a business plan
- principles of risk management relevant to business planning
- reasons for and benefits of, business planning
- relevant industry codes of practice
- setting goals and objectives
- types of business planning - feasibility studies; strategic, operational, financial and marketing planning.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

EVIDENCE GUIDE	
Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • development of a business plan which provides for finance, marketing and provision of products/services to facilitate the business goals and objectives • identification of and planning for, OHS and duty of care responsibilities • development of risk management strategies • knowledge of relevant legislation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to relevant documentation • candidate's individual circumstances and work in the context of running a small business, are the basis for assessment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • portfolio of evidence including a business plan and risk management strategies • oral or written questioning to assess knowledge of OHS responsibilities and procedures for identifying hazards relevant to the business • demonstration of practical skills • review of documented business goals and objectives • review of contingency plans developed to address possible areas of non-conformance with the business plan.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBSMB401A Establish legal and risk management requirements of small business • BSBSMB402A Plan small business finances • BSBSMB403A Market the small business.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Business plan may include:

- business opportunities, which may be influenced by:
 - amount and types of finance available
 - expected financial viability
 - skills of operator
- details of ownership/management
- finance, expenditure statement, balance sheet and cash flow forecast, projections for the initial years of operation assumptions underlying the business plan, expected level of inflation and taxation, expected trend of interest rate, capital expenditure and its timing, stock turnover, debtors collection period, creditor payment period, return on investment
- level of risk involved, risk assessment and management
- market focus of the business
- marketing requirements
- need to raise finance and requirements of lenders
- organisation/operational arrangements
- proposed size and scale of the business
- recognition of any seasonal or cyclical (time-based) elements which are crucial to the success of the business
- resources required and available
- sources of funding
- specialist services and sources of advice that may be required
- staffing
- stages in the business development

Business goals and objectives may include:

- customer needs/marketing projections
- family or community benefits

RANGE STATEMENT	
	<ul style="list-style-type: none"> • financial projections • goals, objectives, plans, systems and processes • lifestyle issues • market focus of the business • proposed size and scale of the business • short-, medium- or long-term goals • social responsibility
<i>Occupational health and safety issues</i> must include:	<ul style="list-style-type: none"> • identification of specific hazard issues such as occupational violence, security, manual handling, equipment and hazardous substances • management of the organisation and operation of OHS as part of the business plan • procedures for managing hazards in the workplace (identify, assess and control) • provisions for ensuring safety of members of the public and contractors visiting the premises/worksite
<i>Financial plan</i> may include:	<ul style="list-style-type: none"> • analysis of sales by product/service, identifying where they were sold and to whom • cash flow estimates for each forward period • current financial state of the enterprise (or owner/operator) • estimates of profit and loss projections for each forward period • financial performance to date (if applicable) • likely return on investment • monthly, quarterly or annual returns • non-recurrent assets calculations • profit, turnover, capital and equity targets • projected profit targets, pricing strategies, margins • projections of likely financial results (budgeting) • projections, which may vary depending on the importance of such information and the stage in the life of the business • resources required to implement the proposed marketing and production strategies (staff, materials, plant and equipment) • review of financial inputs required (sources

RANGE STATEMENT	
	<p>and forms of finance)</p> <ul style="list-style-type: none"> • risks and measures to manage or minimise risks • working, fixed, debt and equity capital
<i>Marketing strategies</i> may include:	<ul style="list-style-type: none"> • achieving lower costs of production and distribution than competitors • creating a very different product line or service so that the business becomes a class leader in the industry • distribution • pricing, presentation and display of products/services • product design and packaging • product range and mix • promotion and advertising • pursuing cost leadership and/or product differentiation within a specialist market segment
<i>Production/operations plan</i> may include:	<ul style="list-style-type: none"> • customer requirements, market expectations, budgetary constraints • industrial relations climate and quality assurance considerations • means of supply and distribution • operational targets and action plan, which may include short-, medium- or long-term goals • options for production, delivery, technical and customer service and support
<i>Staffing requirements</i> may include:	<ul style="list-style-type: none"> • full-time, part-time staff, permanent, temporary or casual staff • owner/operator • sub-contractors or external advisers/consultants
<i>Specialist services</i> may include:	<ul style="list-style-type: none"> • accountants • business advisors and consultants • business brokers • contractors • government agencies • industry/trade associations • lawyers and providers of legal advice • mentors

RANGE STATEMENT	
	<ul style="list-style-type: none"> • online gateways
<i>Relevant people</i> may include:	<ul style="list-style-type: none"> • clients • family members • franchise agency • owner/operator, partners, financial backers • regulatory bodies • suppliers • trade or industry associations
<i>Risk management strategies</i> may include:	<ul style="list-style-type: none"> • breach of contract, product liability • knowledge management • measures to manage risk including professional indemnity, securing appropriate insurance to cover loss of earnings through sickness/accidents, drought, flood, fire, theft • security systems to provide physical security of premises, plant, equipment, goods and services • security of intellectual property
<i>Risk management strategies</i> must include:	<ul style="list-style-type: none"> • OHS requirements
<i>Contingency plan</i> may include:	<ul style="list-style-type: none"> • disturbances to cash flow, supply and/or distribution • sickness or personal considerations

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Small and Micro Business
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Co-requisite units

Co-requisite units		

BSBSMB406A Manage small business finances

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to implement, monitor and review strategies for the ongoing management of a small business's finances. It also includes day to day financial management of the small business.</p> <p>Specific legal requirements apply to the management of a small business.</p>
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Application of the Unit

Application of the unit	<p>This work is undertaken by individuals who operate a small business.</p> <p>The unit is suitable for existing micro and small businesses or a department in a larger organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement financial plan	<p>1.1. Identify <i>financial information</i> requirements and obtain <i>specialist services</i>, as required, to profitably operate and extend the business in accordance with the business plan</p> <p>1.2. Produce financial budgets/projections, including <i>cash flow</i> estimates, as required for each forward period, and distribute to <i>relevant people</i> in accordance with legal requirements</p> <p>1.3. Negotiate, secure and manage business capital to best enable implementation of the business plan and to meet the requirements of <i>financial backers</i></p> <p>1.4. Develop and maintain strategies to enable adequate financial provision for taxation in accordance with legal requirements</p> <p>1.5. Develop, monitor and maintain client <i>credit policies</i>, including contingencies for debtors in default, to maximise cash flow</p> <p>1.6. Select key performance indicators to enable ongoing monitoring of financial performance</p> <p>1.7. Record and communicate financial procedures to relevant people to facilitate implementation of the business plan</p>
2. Monitor financial performance	2.1. Regularly monitor and report on financial performance targets and analyse data to establish the

ELEMENT	PERFORMANCE CRITERIA
	<p>extent to which the <i>financial plan</i> has been met</p> <p>2.2. Monitor marketing and operational strategies for their effects on the financial plan</p> <p>2.3. Calculate and evaluate <i>financial ratios</i> according to own/industry benchmarks</p> <p>2.4. Assess financial plan to determine whether variations or alternative plans are needed, and change as required</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to interpret financial data
- communication skills to negotiate capital and to report on performance
- literacy skills to interpret legal requirements and financial reports
- numeracy skills to calculate costs, prices, profit and other financial information.

Required knowledge

The following knowledge must be assessed as part of this unit:

- benchmarking
- financial decision making relevant to the business
- financial indicators
- purpose of financial reports
- preparation and interpretation of budget/actual reports
- principles for preparation of balance sheets and their interpretation
- principles for preparation of profit and loss statements and their interpretation
- stock records/stock control relevant to the business.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

EVIDENCE GUIDE	
Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • development, implementation and review of strategies for the ongoing management of finance • maintenance of day-to-day financial management of the business as well as implementation of broad financial strategies • knowledge of purpose of financial reports.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to relevant documentation • candidate's individual circumstances and work in the context of establishing or running a small business, are the basis for assessment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • portfolio of evidence including financial reports • preparation and review of financial ratios • review of cash flow projections • analysis of development, monitoring and maintenance of client credit policies • oral or written questioning to assess knowledge of principles for preparation of balance sheets and their interpretation.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBSMB402A Plan small business finances • BSBSMB405A Monitor and manage small business operations.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different

RANGE STATEMENT

work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Financial plan</i> may include:</p>	<ul style="list-style-type: none"> • analysis of sales by product/service, identifying where they were sold and to whom • cash flow estimates for each forward period • current financial state of the enterprise (or owner/operator) • estimates of profit and loss projections for each forward period • financial performance to date (if applicable) • likely return on investment • monthly, quarterly or annual returns • non-recurrent assets calculations • profit, turnover, capital and equity targets • projected profit targets, pricing strategies, margins • projections of likely financial results (budgeting) • projections, which may vary depending on the importance of such information and the stage in the life of the business • resources required to implement the proposed marketing and production strategies (staff, materials, plant and equipment) • review of financial inputs required (sources and forms of finance) • risks and measures to manage or minimise risks • working, fixed, debt and equity capital • working in conjunction with external consultants e.g. investment analysts, accountants, financiers
<p><i>Financial information</i> may include:</p>	<ul style="list-style-type: none"> • accrual of staff leave/entitlements • asset management strategies which may include: <ul style="list-style-type: none"> • owning, leasing, sharing, syndicating • maintaining and deploying assets • asset registers • balance sheets • bookkeeping/accounting/stock/job costing records • business activity statements • business capital • cash book

RANGE STATEMENT	
	<ul style="list-style-type: none"> • cash flow forecasts • financial budgets • financial indicators, which may be short-, medium- and/or long-term • payroll records, superannuation entitlements • profit and loss statements • ratios for profitability, liquidity/efficiency/financial structure • risk management • statements/forecasts • taxation returns including goods and services tax
<i>Specialist services</i> may include:	<ul style="list-style-type: none"> • accountants • business brokers/business consultants • government agencies • industry/trade associations • lawyers and providers of legal advice • mentors • online gateways • providers of training in accounting software
<i>Cash flow</i> may include:	<ul style="list-style-type: none"> • anticipated payments • anticipated receipts • customer credit policy/debt recovery • taxation provisions
<i>Relevant people</i> may include:	<ul style="list-style-type: none"> • family members • financial backers • franchise agency • owner/operator • partners • regulatory bodies • trade or industry associations
<i>Financial backers</i> may include:	<ul style="list-style-type: none"> • financiers/banks/lending institutions • leasing and hire purchase financiers • providers of venture capital • shareholders/partners/owners/family/friends
<i>Credit policies</i> may include:	<ul style="list-style-type: none"> • collateral • credit limits • credit references • debt collection • payment options • proof of Indigenous identity

RANGE STATEMENT	
	<ul style="list-style-type: none"> • trading terms
<i>Financial ratios</i> may include:	<ul style="list-style-type: none"> • current ratio • days debtors outstanding • days stock on hand • expense percentages • gross profit percentage • liquid ratio • net profit percentage • proprietary/debt ratio • return on investment/return on total assets • staff productivity measures • stock turn rates

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Small and Micro Business
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Co-requisite units

Co-requisite units		

BSBSUS501A Develop workplace policy and procedures for sustainability

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to develop and implement a workplace sustainability policy, including the modification of the policy to suit changed circumstances.</p> <p>This unit requires the ability to access industry information, applicable legislative and occupational health and safety (OHS) guidelines.</p> <p>While no licensing, legislative, regulatory or certification requirements apply holistically to this unit at the time of publication, relevant national, state and territory legislation, regulations and codes of practice impact upon this unit.</p>
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Application of the Unit

Application of the unit	<p>This unit addresses the knowledge, processes and techniques necessary to develop approaches to sustainability within workplaces, including the development and implementation of policy.</p> <p>This unit applies to people with managerial responsibility who undertake work developing approaches to create strategies within workplaces, including the development and implementation of policy and includes:</p> <ul style="list-style-type: none"> • communicating with relevant stakeholders • developing and monitoring policies • reviewing and improving policies. <p>A person who demonstrates competence in this unit must be able to provide evidence of the ability to develop and implement integrated sustainability policies and</p>
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	<p>procedures within an enterprise. The review of the policy after implementation will also need to be evidenced.</p> <p>The context of the unit applies to all sectors of the business industry; it may be applied to all sections of an organisation, including the office, the factory floor, or work area. With such a broad application, the unit will need to be contextualised as it is applied across an organisation and across different industry sectors.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop workplace sustainability policy	1.1. Define <i>scope</i> of sustainability policy 1.2. Gather information from a range of <i>sources</i> to plan and develop policy 1.3. Identify and consult <i>stakeholders</i> as a key component of the policy development process 1.4. Include appropriate <i>strategies</i> in policy at all stages of work for minimising resource use, reducing toxic material and hazardous chemical use, and employing life cycle management approaches 1.5. Make recommendations for policy options based on likely effectiveness, timeframes and cost 1.6. Develop policy that reflects the organisation's commitment to sustainability as an integral part of business planning and as a business opportunity 1.7. Agree to appropriate methods of implementation
2. Communicate workplace sustainability policy	2.1. Promote workplace sustainability policy, including its expected outcome to key stakeholders 2.2. Inform those involved in implementing the policy as to outcomes expected, activities to be undertaken and responsibilities assigned
3. Implement workplace sustainability policy	3.1. Develop and communicate procedures to help implement workplace sustainability policy 3.2. Implement strategies for continuous improvement in resource efficiency 3.3. Establish and assign responsibility to use recording systems for tracking continuous improvements in sustainability approaches
4. Review workplace sustainability policy implementation	4.1. Document outcomes and provide feedback to key personnel and stakeholders 4.2. Investigate successes or otherwise of policy 4.3. Monitor records to identify trends that may require remedial action and use to promote continuous improvement of performance 4.4. Modify policy and or procedures as required to ensure improvements are made

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to adjust communication to suit different audiences; to respond effectively to diversity; to work as a member of a team to consult on and validate policy
- literacy skills to read and evaluate complex and formal documents such as policy and legislation
- problem skills to effectively manage different points of view and dissenting stakeholders
- research, analytical and writing skills to research, analyse and present information; to prepare written reports requiring precision of expression and language and structures suited to the intended audience

Required knowledge

- best practice approaches relevant to own work area
- environmental or sustainability legislation, regulations and codes of practice applicable to industry and organisation
- equal employment opportunity, equity and diversity principles and occupational health and safety implications of policy being developed
- policy development processes and practices
- principles, practices and available tools and techniques of sustainability management relevant to the particular industry context
- quality assurance systems relevant to own organisation
- relevant industry competency
- relevant organisational policies, procedures and protocols
- relevant systems and procedures to aid in the achievement of workplace sustainability

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

EVIDENCE GUIDE	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • candidate's involvement as a key person in planning, developing and implementing organisational policy and that the developed policy complies with legislative requirements • implementation strategy, as part of the policy, that has been devised, implemented and reviewed showing a measurable improvement utilising the chosen benchmark indicators • communicating with stakeholders to discuss possible approaches to policy development and implementation, and contributing to the resolution of disputes among stakeholders • developing and monitoring policies for analysing data on enterprise resource consumption • using software systems for recording and filing documentation for measurement of current usage and using word processing and other basic software for interpreting charts, flowcharts, graphs and other visual data and information • reviewing and improving policies by identifying improvements and benchmarking against industry best practice and attempting new approaches continuously over time.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to relevant legislation/standards/guidelines • access to a range of workplace documentation and personnel, information and resources (such as compliance obligations, organisational plans, work responsibilities) • access to reports from other parties involved in the development and implementation of policy • evidence is collected over time, involving both formative and summative assessment • evidence is relevant to the particular workplace role, including work area, equipment, systems, and documentation.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p>

EVIDENCE GUIDE

	<ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on the job performance by the candidate • response to case studies • review of policy developed and procedural documentation outlining the approach taken • review of implementation strategy, plans and work plans • analysis of methods used to involve stakeholders in policy development, implementation and review • analysis of inefficiencies or opportunities for improvements identified in the workplace • evaluation of participation in sustainability work practices and programs such as an environmental management framework • observation over time in relation to review of work area relating to policy and procedures being developed to assess measurement of resources used, hazards and compliance.
<p>Guidance information for assessment</p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBATSIM419A Contribute to the development and implementation of organisational policies • BSBHRM506A Manage recruitment, selection and induction processes • BSBHRM602B Manage human resources strategic planning • BSBINN502A Build and sustain an innovative work environment • BSBMGT515A Manage operational plan • BSBMGT516C Facilitate continuous improvement • BSBMGT608C Manage innovation and continuous improvement • BSBMGT616A Develop and implement strategic plans • BSBMGT617A Develop and implement a business plan • BSBRSK501A Manage risk.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Scope of workplace sustainability policy may include:

- addressing sustainability initiatives through reference to standards, guidelines and approaches such as:
 - ecological foot printing
 - Energy Efficiency Opportunities Bill 20051
 - Global Reporting Initiative
 - green office program
 - green purchasing
 - Greenhouse Challenge Plus (Australian government initiative)
 - ISO 14001:1996 Environmental management systems life cycle analyses
 - life cycle analyses
 - product stewardship
 - supply chain management
 - sustainability covenants/compacts
 - triple bottom line reporting
- integrated approach to sustainability which includes environmental, economic and social aspects, or a specific approach that focuses on each aspect individually
- investigating particular business and market context of the industry/organisation
- meeting relevant laws, by laws and regulations or best practice to support compliance in environmental performance and sustainability at each level as required (such as Environmental Protection or Biodiversity Conservation Act):
 - international
 - commonwealth
 - state/territory
 - industry

RANGE STATEMENT	
	<ul style="list-style-type: none"> • organisation • parts of the organisation to which it is to apply, including whether it is for the whole organisation, one site, one work area or a combination of these.
<i>Sources</i> may include:	<ul style="list-style-type: none"> • regulatory sources • relevant personnel • organisational specifications.
<i>Stakeholders</i> may include:	<ul style="list-style-type: none"> • individuals and groups both inside and outside the organisation who have some direct interest in the organisation's conduct, actions, products and services, including: <ul style="list-style-type: none"> • customers • employees at all levels of the organisation • government • investors • local community • other organisations • regulators • suppliers • key personnel within the organisation and specialists outside the organisation who may have particular technical expertise.
<i>Strategies</i> may include:	<ul style="list-style-type: none"> • promotional activities • raising awareness among stakeholders • training staff in sustainability principles and techniques.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Industry Capability - Sustainability
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Co-requisite units

Co-requisite units		

BSBWHS503A Contribute to the systematic management of WHS risk

Modification History

Release	Comments
Release 1	<p>This Unit first released with <i>BSB07 Business Training Package version 7.0</i>.</p> <p>Replaces and is equivalent to BSBOHS504B Apply principles of OHS risk management.</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to contribute to the systematic management of work health and safety (WHS) risk. It addresses the processes and techniques necessary to contribute to the systematic management of WHS risk.

Application of the Unit

This unit applies to people who work in a range of WHS roles across all industries and who apply a substantial knowledge base and well-developed skills in a wide variety of WHS contexts.

NOTE: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Access information and data to contribute to the systematic management of WHS risk	1.1 Identify <i>sources of information and data</i> 1.2 Obtain information and data to determine the purposes, objectives, principles and framework of a systematic approach to managing WHS risk
2. Contribute to effective consultation and participation during all stages of the risk-management process	2.1 Identify <i>individuals and parties</i> who need to participate and be consulted 2.2 Apply knowledge of effective consultation and participation to contribute to ensuring effective consultation and participation processes occur
3. Contribute to establishing the context for risk management	3.1 Apply knowledge of <i>WHS legislation</i> to identify <i>duty holders</i> and legislative requirements for WHS risk management 3.2 Identify individuals and parties impacting on risk management 3.3 Apply knowledge of organisation to identify factors that will impact on risk control 3.4 Contribute to establishing the <i>context of the risk-management process</i> 3.5 Contribute to defining <i>risk criteria</i>
4. Contribute to risk assessment	4.1 Apply knowledge of workplace hazards and risks to contribute to <i>risk identification</i> 4.2 Apply knowledge of WHS legislation, risk assessment and workplace WHS information and data to contribute to <i>risk</i>

	<i>analysis and evaluation</i>
5. Contribute to risk treatment	<p>5.1 Apply knowledge of WHS hazard and risk control, and WHS legislation to contribute to the selection of <i>risk treatment options</i></p> <p>5.2 Apply knowledge of the organisation's WHS management system (WHSMS) and WHS information system (WHSIS) to prepare and implement risk treatments</p>
6. Contribute to monitoring, reviewing and recording risk-management process	<p>6.1 Apply knowledge of the organisation's WHSMS to contribute to monitoring and reviewing risk-management process</p> <p>6.2 Apply knowledge of the organisation's WHSIS to contribute to recording risk-management process</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to read and interpret relevant workplace information and data
- communication skills to:
 - conduct effective formal and informal meetings and communicate effectively with personnel at all levels of the organisation, and with external parties and individuals
 - use language appropriate to the work team and the task
- consultation and negotiation skills to:
 - develop plans
 - implement and monitor designated actions
- information technology skills to:
 - access and download internal and external information and data on WHS
 - use a range of communication media
- literacy skills to write policies, procedures and plans
- numeracy skills to:
 - analyse workplace information and data
 - carry out calculations
 - identify trends
- organisational skills to manage own tasks within a timeframe
- project-management skills to:
 - achieve continuous improvement
 - action processes about WHS matters

- research skills to:
 - access relevant WHS information and data
 - identify areas for improvement
 - interpret information and data.

Required knowledge

- difference between hazard and risk
- formal and informal communication and consultation processes, and key personnel related to communication
- how the characteristics and composition of the workforce impact on WHS risk and the management of WHS, including:
 - communication skills
 - cultural background and diversity
 - gender
 - labour market changes
 - language, literacy and numeracy levels of the workforce
 - structure and organisation of the workforce, including part time, casual and contract workers; shift rosters; and geographical location
 - workers with specific needs and limitations
 - workplace culture towards alcohol and other drug use
- internal and external sources of WHS information and data, and how to access them
- limitations of generic hazard identification and risk assessment checklists, and risk ranking processes
- nature of workplace processes (work flow, planning and control) and hazards relevant to the workplace
- organisational behaviour and culture as they impact on WHS and on change
- organisational culture as it impacts on the work team
- organisational WHS policies, procedures, processes and systems
- other functional areas that impact on the management of WHS
- pertinent sections of relevant Australian standards and publications, including:
 - AS/NZS ISO 31000–2009 Risk Management – Principles and Guidelines
 - Standards Australia publication HB 327:2010 Communicating and consulting about risk (Companion to AS/NZS ISO 31000:2009)
 - Standards Australia publication HB 158-2010 Delivering assurance based on ISO 31000:2009 – Risk management – Principles and guidelines
- principles and practices of a systematic approach to managing WHS
- principles of duty of care, including concepts of causation, foreseeability and preventability
- principles of incident causation and injury processes

- range of risk analysis and assessment techniques and tools, and their application and limitations
- relevant commonwealth and state or territory WHS Acts, regulations, codes of practice, standards and guidance material, and other relevant publications, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks
- risk as the effect of uncertainty on objectives
- risk management as a duty of persons conducting businesses or undertakings (PCBUs) or their officers under WHS legislation
- roles and responsibilities of individuals and parties under WHS legislation
- sources of occupational disease and their prevention
- standard industry controls for a range of hazards
- techniques, tools and processes for identifying and controlling health and safety hazards and risks, including:
 - hazard and risk checklists
 - hazard hunts
 - job safety analyses
 - manifests and registers, including for dangerous goods, hazardous chemicals and plant
 - safe work method statements
 - surveys using questionnaires, interviews and other survey techniques
 - workplace inspections and walk throughs
- toxicology of hazardous chemicals and potential health effects in the workplace.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • contributing to the development, implementation and evaluation of a systematic approach to WHS risk management • knowledge of pertinent sections of relevant Australian standards and WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks • preparing an action plan to implement a systematic approach to WHS risk management • preparing positive performance indicators for

	evaluation of a systematic approach to WHS risk management.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • actual workplaces and stakeholder groups • office equipment and resources • relevant legislation, standards and guidelines • workplace documentation • reports from other parties consulted during the approach to WHS risk management.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • demonstration of techniques used to identify, analyse, evaluate, control and monitor risks • direct questioning combined with review of portfolios of evidence and third-party reports of on-the-job performance by the candidate • observation of performance in role plays • observation of presentations • review of information and data communicated to stakeholders about the WHS risk process • assessment of comparison of outcomes of WHS risk analysis with criteria • review of documentation of process and outcomes of analysis and evaluation of WHS risk of a task or process.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBWHS502A Manage effective WHS consultation and participation processes • BSBWHS504A Manage WHS hazards and risks • BSBWHS506A Contribute to developing, implementing and maintaining WHS management systems • BSBWHS507A Contribute to managing WHS information systems

	<ul style="list-style-type: none"> • BSBWHS508A Manage WHS hazards associated with plant.
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Sources of information and data may include:	<ul style="list-style-type: none"> • Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines • Standards Australia publication HB 327:2010 Communicating and consulting about risk (Companion to AS/NZS ISO 31000:2009) • Standards Australia publication HB 158-2010 Delivering assurance based on ISO 31000:2009 – Risk management – Principles and guidelines • industry associations • Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks • unions • WHS professionals • WHS professional associations • WHS specialists.
Individuals and parties may include:	<ul style="list-style-type: none"> • contractors and suppliers • health and safety committees • health and safety representatives • industry associations • managers and supervisors • PCBUs or their officers • unions • WHS inspectors • WHS professionals • WHS professional associations • WHS regulators • WHS specialists • workers.
WHS legislation may include:	<ul style="list-style-type: none"> • WHS Acts, regulations and codes of practice,

	including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks.
<i>Duty holders</i> may include:	<ul style="list-style-type: none"> • as specified in WHS Acts: <ul style="list-style-type: none"> • PCBUs or their officers • workers • other persons at a workplace.
<i>Context of the risk-management process</i> may include:	<ul style="list-style-type: none"> • as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines • as specified in WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks • organisational requirements, such as integration with work processes, and other organisational systems, for example information technology, human resources, quality, management and environment.
<i>Risk criteria</i> may include:	<ul style="list-style-type: none"> • as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines • as specified in WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks.
<i>Risk identification</i> may include:	<ul style="list-style-type: none"> • analysing existing WHS information – desktop identification • as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines • as specified in the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks • incident investigations • using hazard registers • workplace inspections.
<i>Risk analysis and evaluation</i> may include:	<ul style="list-style-type: none"> • as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines • meeting requirements of WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks

	<ul style="list-style-type: none"> • gathering information on hazards to see what harms they may cause • assessing who and how many may be harmed by a hazard • examining acceptability of a risk • examining severity and likelihood of harm occurring • using risk level matrices to rate and prioritise risks.
<p><i>Risk treatment options</i> may include:</p>	<ul style="list-style-type: none"> • as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines • options based on the hierarchy of control • options based on the as low as reasonably practicable (ALARP) principle • options that meet the requirements of WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks.

Unit Sector(s)

Regulation, Licensing and Risk – Work Health and Safety

BSBWOR204A Use business technology

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to select, use and maintain a range of business technology. This technology includes the effective use of computer software to organise information and data.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who use business technology to perform a range of routine tasks. They use a limited range of practical skills and fundamental knowledge of equipment use and the organisation of data or files in a defined context, under direct supervision or with limited individual responsibility.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and use technology	<p>1.1. Select appropriate <i>technology</i> and <i>software applications</i> to achieve the requirements of the task</p> <p>1.2. Adjust workspace, furniture and equipment to suit user ergonomic requirements</p> <p>1.3. Use technology according to <i>organisational requirements</i> and in a way which promotes a safe work environment</p>
2. Process and organise data	<p>2.1. Identify, open, generate or amend files and records according to task and organisational requirements</p> <p>2.2. Operate <i>input devices</i> according to organisational requirements</p> <p>2.3. <i>Store data</i> appropriately and exit applications without damage to or loss of, data</p> <p>2.4. Use manuals, training booklets and/or online help or help-desks to overcome basic difficulties with applications</p>
3. Maintain technology	<p>3.1. Identify and replace used <i>technology consumables</i> in accordance with manufacturer's instructions and organisational requirements</p> <p>3.2. Carry out and/or arrange <i>routine maintenance</i> to ensure equipment is maintained in accordance with manufacturer's instructions and organisational requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. <i>Identify equipment faults</i> accurately and take action in accordance with manufacturer's instructions or report fault to designated person

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to identify work requirements; to understand and process basic, relevant workplace information; and to follow written instructions
- communication skills to request advice, to receive feedback and to work with a team
- problem-solving skills to solve routine technology problems.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
- ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- organisational policies, plans and procedures, especially in regard to file-naming and storage conventions
- organisational IT procedures including back-up and virus protection procedures
- basic technical terminology in relation to reading help-files and manuals.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • selection and application of appropriate equipment and software applications in relation to assigned task/s • access, retrieval and storage of required data • performance of basic maintenance on a range of office equipment
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of files and data for storage • manuals and training booklets for equipment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of office equipment • evaluation of maintaining technology.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • IT use units • other industry capability units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised

RANGE STATEMENT	
wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Technology may include:	<ul style="list-style-type: none"> • computer technology, such as laptops and personal computers • digital cameras • modems • printers • scanners • zip drives • photocopiers • shredders • binders • laminators • cutters
Software applications may include:	<ul style="list-style-type: none"> • email, internet • word processing, spreadsheet, database, accounting or presentation packages
Organisational requirements may include:	<ul style="list-style-type: none"> • correctly identifying and opening files • legal and organisation policies, guidelines and requirements • locating data • log-on procedures • manufacturer's guidelines • OHS policies, procedures and programs • saving and closing files • storing data
Input devices may include:	<ul style="list-style-type: none"> • keyboard • mouse • numerical key pad • scanner
Storage of data may include:	<ul style="list-style-type: none"> • appropriate storage/filing of hard copies of computer generated documents • storage in directories and sub-directories • storage on CD-ROMs, hard and floppy disk drives or back-up systems
Technology consumables may include:	<ul style="list-style-type: none"> • back-up tapes • CD-ROM • floppy disks

RANGE STATEMENT	
	<ul style="list-style-type: none"> • print heads • printer ribbons and cartridges • toner cartridges • zip disks
<i>Routine maintenance</i> may include:	<ul style="list-style-type: none"> • in-house cleaning and servicing of equipment according to manufacturer's guidelines • periodic servicing by qualified or manufacturer approved, technician • regular checking of equipment • replacing consumables
<i>Identifying equipment faults</i> may include:	<ul style="list-style-type: none"> • checking repairs have been carried out • encouraging feedback from work colleagues • keeping a log book of detected faults • preparing a maintenance program • regular back-ups of data • regular OHS inspections • routine checking of equipment

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Industry Capability - Workplace Effectiveness
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Co-requisite units

Co-requisite units	

BSBWOR301B Organise personal work priorities and development

Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i></p> <p>Revised unit. Performance criteria and required skills updated to focus on learning and development practices, KPIs and compliance with policy and procedures.</p> <p>Replaces BSBWOR301A Organise personal work priorities and development</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to organise own work schedules, to monitor and obtain feedback on work performance, and to maintain required levels of competence. Operators may exercise discretion and judgement using appropriate theoretical knowledge of work scheduling and performance improvement to provide technical advice and support to a team.

Application of the Unit

This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Organise and complete own work schedule	<p>1.1 Ensure that <i>work goals, objectives</i> or <i>KPIs</i> are understood, negotiated and agreed in accordance with <i>organisational requirements</i></p> <p>1.2 Assess and prioritise workload to ensure tasks are completed within identified timeframes</p> <p>1.3 Identify <i>factors affecting the achievement of work objectives</i> and incorporate contingencies into work plans</p> <p>1.4 Use <i>business technology</i> efficiently and effectively to manage and monitor scheduling and completion of tasks</p>
2. Monitor own work performance	<p>2.1 Accurately monitor and adjust personal work performance through self-assessment to ensure achievement of tasks and compliance with legislation and work processes or KPIs</p> <p>2.2 Ensure that <i>feedback on performance</i> is actively sought and evaluated from colleagues and clients in the context of individual and group requirements</p> <p>2.3 Routinely identify and report on variations in the quality of and <i>products and services</i> according to organisational requirements</p> <p>2.4 Identify <i>signs of stress</i> and effects on <i>personal wellbeing</i></p> <p>2.5 Identify <i>sources of stress</i> and access appropriate <i>supports and resolution strategies</i></p>
3. Coordinate personal skill development and learning	<p>3.1 Identify personal learning and professional development needs and skill gaps using self-assessment and advice from colleagues and clients in relation to role and organisational requirements</p> <p>3.2 Identify, prioritise and plan opportunities for undertaking personal skill development activities in liaison with work groups and relevant personnel</p> <p>3.3 Access, complete and record <i>professional development</i></p>

	<p><i>opportunities</i> to facilitate continuous learning and career development</p> <p>3.4 Incorporate formal and informal feedback into review of further learning needs</p>
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Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to give and receive constructive feedback relating to development needs
- literacy skills to read and understand the organisation's procedures
- planning skills to organise work priorities according to work goals and objectives
- problem-solving skills to solve routine problems
- self-management skills to:
 - comply with policies and procedures
 - consistently evaluate and monitor own performance
 - seek learning opportunities.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- organisational policies, plans and procedures
- methods to elicit, analyse and interpret feedback
- principles and techniques of goal setting, measuring performance, time management and personal assessment
- competency standards and how to interpret them in relation to self
- methods to identify and prioritise personal learning needs.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • preparing work plans • scheduling and prioritising work objectives and tasks • knowledge of the principles and techniques of goal setting, measuring performance, time management and personal assessment.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of work schedules and performance improvement plans.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of self-assessment documentation outlining learning and development needs • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of methods to identify and prioritise personal learning needs • evaluation of planning for personal skill development activities and professional development opportunities.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Work goals and objectives</i> may include:</p>	<ul style="list-style-type: none"> • budgetary targets • production targets • reporting deadlines • sales targets • team and individual learning goals • team participation.
<p><i>KPIs</i> may include:</p>	<ul style="list-style-type: none"> • key performance indicators on customer satisfaction • key performance indicators on customer effort • monitoring time taken to answer calls • operating within reporting protocols • score tools such as net promoter • understanding metrics.
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> • access and equity principles and practice • business and performance plans • defined resource parameters • ethical standards • goals, objectives, plans, systems and processes • legal and organisational policies, guidelines and requirements • OHS policies, procedures and programs • quality and continuous improvement processes and standards • quality assurance and/or procedures manuals.
<p><i>Factors affecting the achievement of work objectives</i> may include:</p>	<ul style="list-style-type: none"> • budget constraints • competing work demands • environmental factors such as time, weather • resource and materials availability • technology/equipment breakdowns • unforeseen incidents • workplace hazards, risks and controls.
<p><i>Business technology</i> may include:</p>	<ul style="list-style-type: none"> • computer applications • computers • email

	<ul style="list-style-type: none"> • facsimile machines • internet/extranet/intranet • modems • personal schedulers • photocopiers • printers • scanners.
Feedback on performance may include:	<ul style="list-style-type: none"> • formal/informal performance appraisals • obtaining feedback from clients • obtaining feedback from supervisors and colleagues • personal, reflective behaviour strategies • routine organisational methods for monitoring service delivery.
Products and services may include:	<ul style="list-style-type: none"> • either products or services • goods • ideas • infrastructure • private or public sets of benefits.
Signs of stress may include:	<ul style="list-style-type: none"> • absence from work • alcohol or other substance abuse • conflict • poor work performance.
Personal wellbeing may include:	<ul style="list-style-type: none"> • cultural • emotional • social • spiritual.
Sources of stress may include:	<ul style="list-style-type: none"> • complex tasks • cultural issues • work and family conflict • workloads.
Supports and resolution strategies may include:	<ul style="list-style-type: none"> • awareness raising • counselling • employee assistance programs (EAP) • family support • group activities • job design • mediation • sharing load • time off • training.
Professional development	<ul style="list-style-type: none"> • career planning/development

opportunities may include:	<ul style="list-style-type: none">• coaching, mentoring and/or supervision• formal/informal learning programs• internal/external training provision• performance appraisals• personal study• quality assurance assessments and recommendations• recognition of current competence/skills recognition• work experience/exchange/opportunities• workplace skills assessment.
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Unit Sector(s)

Industry Capability – Workplace Effectiveness

Custom Content Section

Not applicable.

BSBWOR401A Establish effective workplace relationships

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to collect, analyse and communicate information and to use that information to develop and maintain effective working relationships and networks, with particular regard to communication and representation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Frontline managers play an important role in developing and maintaining positive relationships in internal and external environments so that customers, suppliers and the organisation achieve planned outputs and outcomes. They play a prominent part in motivating, mentoring, coaching and developing team cohesion through providing leadership for the team and forming the bridge between the management of the organisation and team members.</p> <p>At this level, work will normally be carried out within routine and non routine methods and procedures, which require planning and evaluation, and leadership and guidance of others.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect, analyse and communicate information and ideas	<p>1.1. Collect relevant <i>information</i> from appropriate sources and analyse and share with the work team to improve work performance</p> <p>1.2. Communicate ideas and information in a manner which is appropriate and sensitive to the cultural and social diversity of the audience and any specific needs</p> <p>1.3. Implement <i>consultation processes</i> to encourage employees to contribute to issues related to their work, and promptly relay feedback to the work team in regard to outcomes</p> <p>1.4. Seek and value contributions from internal and external sources in developing and refining new ideas and approaches</p> <p>1.5. Implement <i>processes</i> to ensure that issues raised are resolved promptly or referred to <i>relevant personnel</i></p>

ELEMENT	PERFORMANCE CRITERIA
	as required
2. Develop trust and confidence	2.1. Treat all internal and external contacts with integrity, respect and empathy 2.2. Use the <i>organisation's social, ethical and business standards</i> to develop and maintain effective relationships 2.3. Gain and maintain the trust and confidence of <i>colleagues, customers and suppliers</i> through competent performance 2.4. Adjust interpersonal styles and methods to meet organisation's social and cultural environment 2.5. Encourage other members of the work team to follow examples set, according to <i>organisation's policies and procedures</i>
3. Develop and maintain networks and relationships	3.1. Use <i>networks</i> to identify and build relationships 3.2. Use networks and other work relationships to provide identifiable benefits for the team and organisation
4. Manage difficulties into positive outcomes	4.1. Identify and analyse difficulties, and take action to rectify the situation within the requirements of the organisation and relevant legislation 4.2. Guide and support colleagues to resolve work difficulties 4.3. Regularly review and improve <i>workplace outcomes</i> in consultation with relevant personnel 4.4. Manage <i>poor work performance</i> within the organisation's processes 4.5. Manage conflict constructively within the organisation's processes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- coaching and mentoring skills to provide support to colleagues
- literacy skills to research, analyse, interpret and report information

REQUIRED SKILLS AND KNOWLEDGE

- relationship management and communication skills to:
 - deal with people openly and fairly
 - forge effective relationships with internal and/or external people, and to develop and maintain these networks
 - gain the trust and confidence of colleagues
 - respond to unexpected demands from a range of people
 - use supportive and consultative processes effectively.

Required knowledge

- relevant legislation from all levels of government that affects business operation, especially in regard to occupational health and safety (OHS), and environmental issues, equal opportunity, industrial relations and anti-discrimination
- theory associated with managing work relationships to achieve planned outcomes:
 - developing trust and confidence
 - maintaining consistent behaviour in work relationships
 - understanding the cultural and social environment
 - identifying and assessing interpersonal styles
 - establishing, building and maintaining networks
 - identifying and resolving problems
 - resolving conflict
 - managing poor work performance
 - monitoring, analysing and introducing ways to improve work relationships.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- range of methods and techniques for communicating information and ideas to a range of stakeholders
- range of methods and techniques for developing positive work relationships that build trust and confidence in the team
- accessing and analysing information to achieve

EVIDENCE GUIDE	
	<p>planned outcomes</p> <ul style="list-style-type: none"> techniques for resolving problems and conflicts and dealing with poor performance knowledge of the theory associated with managing work relationships to achieve planned outcomes.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> demonstration of techniques in managing poor performance and communicating effectively direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate observation of performance in role plays observation of presentations oral or written questioning to assess knowledge of relevant legislation review of consultation processes implemented to encourage employees to contribute to issues related to their work review of documentation outlining reviewing of workplace outcomes.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other units from the Certificate IV in Frontline Management.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work

RANGE STATEMENT	
situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Information may include:	<ul style="list-style-type: none"> • data appropriate to work roles and organisational policies that is shared and retrieved in writing or verbally, electronically or manually such as: <ul style="list-style-type: none"> • archived, filed and historical background data • individual and team performance data • marketing and customer related data • planning and organisational documents including the outcomes of continuous improvement and quality assurance • policies and procedures
Consultation processes may include:	<ul style="list-style-type: none"> • feedback to the work team and relevant personnel in relation to outcomes of the consultation process • opportunities for all employees to contribute to ideas and information about organisational issues
Processes to ensure that issues raised are resolved promptly or referred may include:	<ul style="list-style-type: none"> • conducting informal meetings • coordinating surveys or questionnaires • distributing newsletters or reports • exchanging informal dialogue with relevant personnel • participating in planned organisational activities
Relevant personnel may include:	<ul style="list-style-type: none"> • managers • OHS committee and other people with specialist responsibilities • other employees • supervisors • union representatives/groups
Organisation's social, ethical and business standards may refer to:	<ul style="list-style-type: none"> • implied standards such as honesty and respect relative to the organisational culture and generally accepted within the wider community • rewards and recognition for high performing staff • standards expressed in legislation and regulations such as anti-discrimination

RANGE STATEMENT	
	<p>legislation</p> <ul style="list-style-type: none"> • written standards such as those expressed in: <ul style="list-style-type: none"> • code of workplace conduct/behaviour • dress code • policies • statement of workplace values • vision and mission statements
<i>Colleagues, customers and suppliers</i> may include:	<ul style="list-style-type: none"> • both internal and external contacts • employees at the same level and more senior managers • people from a wide variety of social, cultural and ethnic backgrounds • team members
<i>Organisation's policies and procedures</i> may refer to:	<ul style="list-style-type: none"> • Materials Safety Data Sheets • organisational tasks and activities undertaken to meet performance outcomes • sets of accepted actions approved by the organisation • Standard Operating Procedures
<i>Networks</i> may be:	<ul style="list-style-type: none"> • established structures or unstructured arrangements and may include business or professional associations • informal or formal and with individuals or groups • internal and/or external
<i>Workplace outcomes</i> may include:	<ul style="list-style-type: none"> • OHS processes and procedures • performance of the work team
<i>Poor work performance</i> may refer to:	<ul style="list-style-type: none"> • individual team members • organisation as a whole • self • whole work team

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Industry Capability - Workplace Effectiveness
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Co-requisite units

Co-requisite units		

BSBWOR402A Promote team effectiveness

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to promote teamwork. It involves developing team plans to meet expected outcomes, leading the work team, and proactively working with the management of the organisation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Frontline managers have an important leadership role in the development of efficient and effective work teams. They play a prominent part in team planning, supervising the performance of the team and developing team cohesion. They provide leadership for the team and bridge the gap between the management of the organisation and the team members. As such they must 'manage up' as well as manage their team/s.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan to achieve team outcomes	<p>1.1. Identify, establish and document <i>team purpose, roles, responsibilities, goals, plans and objectives</i> in <i>consultation</i> with team members</p> <p>1.2. Support team members in meeting expected outcomes</p>
2. Develop team cohesion	<p>2.1. Provide opportunities for input of team members into planning, decision making and operational aspects of work team</p> <p>2.2. Encourage and support team members to take <i>responsibility for own work</i> and to assist each other in undertaking required roles and responsibilities</p> <p>2.3. Provide <i>feedback</i> to team members to encourage, value and reward individual and team efforts and contributions</p> <p>2.4. Recognise and address issues, concerns and problems identified by team members or refer to <i>relevant persons</i> as required</p>

ELEMENT	PERFORMANCE CRITERIA
3. Participate in and facilitate work team	3.1. Actively encourage team members to participate in and take responsibility for team activities and communication processes 3.2. Give the team support to identify and resolve problems which impede its performance 3.3. Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with clients/customers
4. Liaise with management	4.1. Maintain open <i>communication</i> with <i>line manager/management</i> at all times 4.2. Communicate information from line manager/management to the team 4.3. Communicate unresolved issues, concerns and problems raised by the team/team members to line manager/management and ensure follow-up action is taken 4.4. Communicate unresolved issues, concerns and problems related to the team/team members raised by line managers/management to the team and ensure follow-up to action is taken

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - boost team morale
 - deal with team conflict
 - deliver messages from management
 - facilitate discussion
 - mentor and coach
- leadership skills
- planning and organising skills.

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- organisational goals, objectives and plans
- organisational policy and procedures framework
- organisational structure, including organisational chart
- principles and techniques associated with:
 - delegation and work allocation
 - goal setting
 - group dynamics and processes
 - individual behaviour and difference
 - leadership
 - motivation
 - negotiation
 - planning.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- teamwork plan with details of how it was generated and how it will be monitored so that team goals can be met
- techniques in communicating information, dealing with team conflict and resolving issues
- knowledge of organisational goals, objectives and plans.

Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- analysis of responses to case studies and scenarios

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of demonstrated techniques in working with team dynamics • observation of performance in role plays • oral or written questioning to assess knowledge of principles and techniques associated with group dynamics and processes • evaluation of opportunities provided for input of team members into planning, decision making and operational aspects of work team • review of feedback provided to team members • review of teamwork plan.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other units from the Certificate IV in Frontline Management.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Team purpose, roles, responsibilities, goals, plans and objectives</i> may include:</p>	<ul style="list-style-type: none"> • action plans, business plans and operational plans linked to strategic plans • expected outcomes and outputs • goals for individuals and the work team • individual and team performance plans and key performance indicators • occupational health and safety (OHS) responsibilities
<p><i>Consultation</i> may include:</p>	<ul style="list-style-type: none"> • attending meetings, interviews, brainstorming sessions

RANGE STATEMENT	
	<ul style="list-style-type: none"> • using email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual effectiveness • using mechanisms to provide feedback to the work team in relation to consultation outcomes
<i>Responsibility for own work</i> may involve:	<ul style="list-style-type: none"> • individual and joint actions • individuals and teams
<i>Feedback</i> may refer to:	<ul style="list-style-type: none"> • formal/informal gatherings between team members where there is communication on work related matters • informal communication of ideas and thoughts on specific tasks, outcomes, decisions, issues or behaviours
<i>Relevant persons</i> may include:	<ul style="list-style-type: none"> • colleagues • direct superior or other management representatives • OHS committees and other people with specialist responsibilities
<i>Communication</i> may include:	<ul style="list-style-type: none"> • face-to-face • formal/informal interaction • verbal, written or electronic communication
<i>Line manager/management</i> may refer to:	<ul style="list-style-type: none"> • direct superior or other management representatives

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBWOR501B Manage personal work priorities and professional development

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to manage own performance and professional development. Particular emphasis is on setting and meeting priorities, analysing information and using a range of strategies to develop further competence.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to managers and focuses on the need for managers to be organised, focussed and skilled, in order to effectively manage the work of others. As such it is an important unit for most managers, particularly as managers serve as role models and have a significant influence on the work culture and patterns of behaviour.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish personal work goals	<p>1.1. Serve as a positive role model in the workplace through personal work planning and organisation</p> <p>1.2. Ensure personal work goals, plans and activities reflect the organisation's plans, and <i>own responsibilities and accountabilities</i></p> <p>1.3. Measure and maintain personal performance in varying work conditions, work contexts and contingencies</p>
2. Set and meet own work priorities	<p>2.1. Take initiative to prioritise and facilitate competing demands to achieve personal, team and organisational goals and objectives</p> <p>2.2. Use <i>technology</i> efficiently and effectively to manage work priorities and commitments</p> <p>2.3. Maintain appropriate work-life balance, and ensure stress is effectively managed and health is attended to</p>
3. Develop and maintain professional competence	<p>3.1. Assess personal knowledge and skills against <i>competency standards</i> to determine development needs, priorities and plans</p> <p>3.2. Seek feedback from employees, <i>clients and colleagues</i> and use this feedback to identify and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>develop ways to improve competence</p> <p>3.3. Identify, evaluate, select and use <i>development opportunities</i> suitable to personal learning style/s to develop competence</p> <p>3.4. Undertake participation in networks to enhance personal knowledge, skills and work relationships</p> <p>3.5. Identify and develop new skills to achieve and maintain a competitive edge</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to receive, analyse and report on feedback
- literacy skills to interpret written and verbal information about workplace requirements
- organisational skills to set and achieve priorities.

Required knowledge

- principles and techniques involved in the management and organisation of:
 - performance measurement
 - personal behaviour, self-awareness and personality traits identification
 - personal development plan
 - personal goal setting
 - time management
- management development opportunities and options for self
- organisation's policies, plans and procedures
- types of learning style/s and how they relate to the individual
- types of work methods and practices that can improve personal performance.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • systems and processes (electronic or paper-based) used to organise and prioritise tasks, which show how work is managed • personal development plan, with career objectives and an action plan
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentations • oral or written questioning to assess knowledge of work methods and practices that can improve personal performance • review of personal work goals, plans and activities • evaluation of work-life balance • review of documentation assessing personal knowledge and skills against competency standards.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other units from the Diploma of Management.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different

RANGE STATEMENT	
work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Own responsibilities and accountabilities</i> may include:	<ul style="list-style-type: none"> • expectations of workplace performance as expressed in a performance plan • outputs as expressed in position descriptions or duty statements • statement of conduct outlining an individual's responsibilities/actions/performance
<i>Technology</i> may include:	<ul style="list-style-type: none"> • computerised systems and software, databases, project management and word processing • electronic diary • personal digital assistant (PDA)
<i>Competency standards</i> may include:	<ul style="list-style-type: none"> • enterprise-specific units of competency consistent with work requirements • nationally endorsed units of competency consistent with work requirements
<i>Clients and colleagues</i> may be:	<ul style="list-style-type: none"> • colleagues at the same level and more senior managers • internal or external customers • people from a wide range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities • team members
<i>Development opportunities</i> may include:	<ul style="list-style-type: none"> • action learning • coaching • exchange/rotation • induction • mentoring • shadowing • structured training programs

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBWOR502B Ensure team effectiveness

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to facilitate all aspects of teamwork within the organisation. It involves taking a leadership role in the development of team plans, leading and facilitating teamwork and actively engaging with the management of the organisation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to managers and addresses the need for managers to facilitate work teams and to build a positive culture within work teams. The unit takes a systematic and planned approach to developing teams. It includes the soft skills as well as more structured approaches to the management of teams.</p> <p>At this level, work will normally be carried out within complex and diverse methods and procedures which require the exercise of considerable discretion and judgement, using a range of problem solving and decision making strategies.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish team performance plan	<p>1.1. <i>Consult</i> team members to establish a common understanding of team purpose, roles, responsibilities and <i>accountabilities</i> in accordance with organisational goals, plans and objectives</p> <p>1.2. Develop <i>performance plans</i> to establish expected <i>outcomes, outputs, key performance indicators</i> and goals for work team</p> <p>1.3. <i>Support</i> team members in meeting expected performance outcomes</p>
2. Develop and facilitate team cohesion	<p>2.1. Develop <i>strategies</i> to ensure team members have input into planning, decision making and operational aspects of work team</p> <p>2.2. Develop <i>policies and procedures</i> to ensure team members take responsibility for own work and assist</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>others to undertake required roles and responsibilities</p> <p>2.3. Provide feedback to team members to encourage, value and reward individual and team efforts and contributions</p> <p>2.4. Develop <i>processes</i> to ensure that issues, concerns and problems identified by team members are recognised and addressed</p>
3. Facilitate teamwork	<p>3.1. Encourage team members and individuals to participate in and to take responsibility for team activities, including communication processes</p> <p>3.2. Support the team in identifying and resolving work performance problems</p> <p>3.3. Ensure own contribution to work team serves as a role model for others and enhances the organisation's image for all <i>stakeholders</i></p>
4. Liaise with stakeholders	<p>4.1. Establish and maintain open communication processes with all stakeholders</p> <p>4.2. Communicate information from <i>line manager/management</i> to the team</p> <p>4.3. Communicate unresolved issues, concerns and problems raised by team members and follow-up with line manager/management and other relevant stakeholders</p> <p>4.4. Evaluate and take necessary corrective action regarding unresolved issues, concerns and problems raised by internal or external stakeholders</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to explain team goals, to address team conflict and to build an environment of trust
- planning and organisational skills to keep team on track and focussed on work outcomes.

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- group behaviour
- strategies for mentoring and coaching to informally guide and instruct team members
- issue resolution
- strategies for gaining consensus.

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- range of techniques that can be used to build work teams, strengthen communications in the team and resolve issues
- methods for engaging with stakeholders and obtaining advice from outside the work team, to ensure team is focussed and on track
- knowledge of group behaviour.

Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- analysis of responses to case studies and scenarios
- assessment of written reports
- demonstration of team building techniques
- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- observation of performance in role plays
- review of performance plans developed for work team
- review of policies and procedures developed to

EVIDENCE GUIDE	
	ensure team members take responsibility for own work.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other units from the Diploma of Management.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Consultation</i> may refer to:	<ul style="list-style-type: none"> • conducting meetings, interviews, brainstorming sessions, email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual performance plans • mechanisms used to provide feedback to the work team in relation to outcomes of consultation
<i>Accountabilities</i> may refer to:	<ul style="list-style-type: none"> • responsibilities as defined in position descriptions, codes of conduct/behaviour, duty statements or similar • statement of conduct outlining responsibilities/actions/performance
<i>Performance plans</i> may refer to:	<ul style="list-style-type: none"> • individual performance plans linked to team goals • team plans based on work assignments and responsibilities
<i>Outcomes, outputs, key performance indicators</i> may refer to agreed:	<ul style="list-style-type: none"> • changes in work roles and responsibilities • improved individual and team, performance and participation • improvements to systems, operations • measures for monitoring and evaluating the

RANGE STATEMENT	
	<p>efficiency or effectiveness of systems or services</p> <ul style="list-style-type: none"> • quality standards and expectations • targets for productivity improvements such as reduced downtime, higher production levels, decreases in absenteeism • targets for training and development
<i>Support</i> may include:	<ul style="list-style-type: none"> • Coaching • Mentoring • Training and development opportunities • Clarification of roles and expectations • Long term or short term plans • Meetings
<i>Strategies</i> may refer to:	<ul style="list-style-type: none"> • clarification of roles and expectations • electronic communication devices and processes, such as intranet and email communication systems, to facilitate input • long-term or short-term plans factoring in opportunities for team input • mentoring and 'buddy' systems to support team members in providing input • newsletters and briefings • training and development activities
<i>Policies and procedures</i> may refer to:	<ul style="list-style-type: none"> • organisational guidelines and systems that govern operational functions • procedures that detail the activities that must be carried out for the completion of actions and tasks • Standard Operating Procedures
<i>Processes</i> may refer to:	<ul style="list-style-type: none"> • brainstorming options with the team for addressing concerns • creating a matrix of issues and concerns and distributing for comment • discussions with individuals regarding their concerns • distributing drafts for comment with a range of options for resolution of concerns • training and development sessions
<i>Stakeholders</i> may include:	<ul style="list-style-type: none"> • Board members • business or government contacts • funding bodies

RANGE STATEMENT	
	<ul style="list-style-type: none"> • union/employee groups and representatives • work team
<i>Line manager/management</i> may refer to:	<ul style="list-style-type: none"> • chief executive officer • direct superior • other management representatives

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Industry Capability - Workplace Effectiveness
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Co-requisite units

Co-requisite units		

BSBWRK506A Coordinate research and analysis

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to coordinate and undertake major research projects on behalf of the union. It covers planning research, coordinating and undertaking the research process, managing information systems, compiling reports and evaluating the research process.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals with a well established, sound theoretical knowledge base in unionism and industrial relations who provide leadership to members and staff in the union workplace. They carry high levels of responsibility and work at a senior level in the organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and implement a project plan to undertake research activities	1.1. Define and agree <i>research project</i> objectives and timeframes 1.2. Plan research process and implement in accordance with union policies and procedures 1.3. Ensure agreed project phases, approval and review points are implemented to accommodate all project management function requirements 1.4. Evaluate research process and report in relation to established project baselines to provide appropriate measures of performance
2. Coordinate and undertake the research process	2.1. Define information needs based on work objectives and organisational requirements 2.2. Identify and allocate appropriate resources 2.3. Allocate tasks to identified staff and gain support for the project 2.4. Develop <i>strategies</i> to acquire required information 2.5. Communicate the methods and aims of the research clearly 2.6. Research information in a timely and thorough way and within resource allocation 2.7. Monitor progress of research project and adjust to

ELEMENT	PERFORMANCE CRITERIA
	respond to internal and external factors
3. Analyse information and apply the results of analysis	<p>3.1.Ensure <i>specialist data and information</i> is collected, consolidated and analysed to recommend outcomes and to advise trends to senior staff</p> <p>3.2.Develop appropriate analytical techniques and processes, and apply to information in order to achieve defined objectives and meet requirements</p> <p>3.3.Analyse information to identify facts, issues, patterns, interrelationships and trends</p> <p>3.4.Undertake all work in a timely manner and meet defined standards of the union</p>
4. Manage information systems	<p>4.1.Maintain <i>information systems</i> so that data and system integrity is guaranteed</p> <p>4.2.Maintain a range of standard and complex information systems and applications in accordance with organisational standards</p> <p>4.3.Integrate information in a timely and coherent manner</p>
5. Compile reports from information analysis	<p>5.1.Use the findings from the analysis to provide advice and to develop policies and solutions which meet organisational requirements</p> <p>5.2.Ensure reporting of results from analysis of information includes predictions, assumptions and constraints</p> <p>5.3.Ensure reporting of results and analysis of information is logically sequenced, concise and clear</p>
6. Evaluate the research process	<p>6.1.Identify and communicate criteria for evaluating the effectiveness of research project and phases</p> <p>6.2.Implement and monitor key measurements to evaluate the effectiveness of research processes</p> <p>6.3.Debrief all staff involved in research project on progress and outcomes</p> <p>6.4.Use appropriate strategies to ensure project outcomes are used effectively</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- high level research and analytical skills
- project management skills
- technology skills to store data and to manage information
- well developed writing skills.

Required knowledge

- regional, national and international legislation and regulations relating to industrial relations, occupational health and safety (OHS), vocational education and training, equal opportunity and discrimination, trade practices
- industry knowledge
- union policies and procedures.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- documented research project plan, with research objectives, and the outcomes of the research project which meet the stated objectives
- examples of how information and data in the union is effectively gathered and managed
- knowledge of the industry/s involved in the research.

Context of and specific resources for assessment

Assessment must ensure:

- access to a range of research documentation
- access to systems for gathering and storing data and information.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of agreed research project objectives and timeframes • oral or written questioning to assess knowledge of union policies and procedures • assessment of written reports • review of strategies developed to acquire required information • evaluation of how the methods and aims of the research were communicated.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other workplace relations units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Research projects</i> could involve:	<ul style="list-style-type: none"> • analysis of industry specific trends, statistics and issues • comparative national and international developments • information and analysis needed to develop a campaign, strategic plan, industry or sector plan and strategy, or to bargain effectively with employers • information and analysis to conduct a strategic comprehensive corporate or community campaign
<i>Strategies</i> could include:	<ul style="list-style-type: none"> • commissioned research • computer- or web-based research

RANGE STATEMENT	
	<ul style="list-style-type: none"> • establishing expert or pre-eminent opinions • joint/collaborative work with academics, economists, social researchers, political parties, international agencies and industry groups • use of focus groups, polls and surveys
<i>Specialist data and information</i> could include:	<ul style="list-style-type: none"> • information for a specific cultural or gender perspective • information, research and data in relation to corporations and inter-related bodies and connections within an industry and the economy • labour market, industry and employment statistics and related research • OHS statistics and related research • political and community polling around specific policy issues • vocational education and training statistics and related research
<i>Information systems</i> may involve:	<ul style="list-style-type: none"> • databases and the use of spreadsheets, graphs, trend and time series, and mathematical equations

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Workforce Development - Workplace Relations
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Co-requisite units

Co-requisite units	

Co-requisite units		

BSBWRT401A Write complex documents

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to plan documents, draft text, prepare final text and produce documents of some complexity.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who work in a range of business environments and are skilled in the creation of reports, information and general promotion documents that are more complex than basic correspondence, memos or forms and that require review and analysis of a range of information sources.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan documents	1.1. Determine the <i>purposes</i> of documents 1.2. Choose <i>appropriate formats</i> for documents 1.3. Establish <i>means of communication</i> 1.4. Determine <i>requirements of documents</i> 1.5. Determine <i>categories and logical sequences of data, information and knowledge</i> to achieve document objectives 1.6. Develop overview of structure and content of documents
2. Draft text	2.1. Review and organise available data, information and knowledge according to proposed structure and content 2.2. Ensure data, information and knowledge is aggregated, interpreted and summarised to prepare text that satisfies document purposes and objectives 2.3. Include graphics as appropriate 2.4. Identify gaps in required data and information, and collect additional material from <i>relevant enterprise personnel</i> 2.5. Draft text according to document requirements and genre 2.6. Use language appropriate to the audience

ELEMENT	PERFORMANCE CRITERIA
3. Prepare final text	3.1. Review draft text to ensure document objectives are achieved and requirements are met 3.2. Check grammar, spelling and style for accuracy and punctuation 3.3. Ensure draft text is approved by <i>relevant</i> enterprise personnel 3.4. Process text amendments as required
4. Produce document	4.1. Choose basic <i>design elements</i> for documents appropriate to audience and purpose 4.2. Use word processing software to apply basic design elements to text 4.3. Check documents to ensure all requirements are met

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to clarify requirements of documents
- literacy skills to edit and proofread documents; to create documents with a complex, organised structure of linked paragraphs which use simple and complex syntactic structure
- numeracy skills to collate and present data, graphs and annotated references
- problem-solving skills to use processes flexibly and interchangeably.

Required knowledge

- enterprise style guide/house style
- formatting styles and their impact on formatting, readability and appearance of documents
- organisational requirements for ergonomics, work periods and breaks, and resource conservation techniques
- rules and conventions for written English, as defined by general and specialist dictionaries and books about grammar.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • production of documents • editing draft text to ensure accuracy and clarity of information • knowledge of enterprise style guide/house style.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of documents and style guides.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of structure and content of documents • review of draft documents • review of final documents • demonstration of techniques • oral or written questioning to assess knowledge of word processing software functions.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBITU401A Design and develop complex text documents.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Purposes of documents</i> may include:</p>	<ul style="list-style-type: none"> • conveying research findings • documenting policies, procedures and processes • influencing attitudes, opinions, beliefs • meeting legal requirements • meeting other data, information or knowledge needs of an audience • proposing recommendations, options and actions
<p><i>Appropriate formats</i> for documents may include:</p>	<ul style="list-style-type: none"> • detailed business letters • emails • instructions and procedures • manuals • publications, leaflets, brochures • reports • speeches and presentations • submissions tender documentation and public notices • website text
<p><i>Means of communication</i> may include:</p>	<ul style="list-style-type: none"> • software packages such as MS Word, MS Excel, MS PageMaker, MS PowerPoint and templates
<p><i>Requirements of documents</i> may include:</p>	<ul style="list-style-type: none"> • compliance with genre • compliance with proformas, standardised reporting requirements or undertakings made by the organisation about reporting • file types and sizes for online documents • languages other than English requirements • legal or traditional requirements for the particular document format • organisational policy, procedures and guidelines applying to writing documents, including house style • point numbering systems • requirements for illustrations, photographs, graphs, charts, maps and other illustrative material

RANGE STATEMENT	
	<p>to explain texts</p> <ul style="list-style-type: none"> • standards for references, footnotes, citations, acknowledgements • time lines, including deadlines • word length • writing styles, including simplicity of English and use of technical language
<p><i>Categories and logical sequences of data, information and knowledge</i> may include:</p>	<ul style="list-style-type: none"> • arguments and rebuttals • categories and sequences traditionally used for the particular type of document being prepared • chronological, alphabetical or operating sequences • facts, observations, conclusions and recommendations • illustrative case studies and other examples • linking and summary statements • recommendations and supporting arguments
<p><i>Relevant enterprise personnel</i> may include:</p>	<ul style="list-style-type: none"> • colleagues/staff in own work area section/team members • consultative committees • internal providers of specialist expertise • managers/leaders/coordinators/supervisors • owners • staff in relevant work sections
<p><i>Design elements</i> may include:</p>	<ul style="list-style-type: none"> • capitals and underlining • fonts • headings • illustrations, photographs and other illustrative material for design purposes • justification and alignment • lists and tables • logos, branding, organisational identity requirements • margins and paragraph indentation • page shape • page size • templates • use and amount of colour • use and amount of white space

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Communication - Writing
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Co-requisite units

Co-requisite units		

CHCPOL403C Undertake research activities

Modification History

CHC08 Version 3	CHC08 Version 4	Description
CHCPOL403B Undertake research activities	CHCPOL403C Undertake research activities	Unit updated in V4. ISC upgrade changes to remove references to old OHS legislation and replace with references to new WHS legislation. No change to competency outcome.

Unit Descriptor

Descriptor

This unit describes the knowledge and skills required to implement research relevant to operations of the organisation and/or the community

Application of the Unit

Application

This unit may apply in a range of community service contexts

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare a research plan

- 1.1 Ensure views and interests of *stakeholders* are reflected in the research methodology and it and is compatible with ethical considerations
- 1.2 Select research methodology suitable to needs, purposes and resources and to maximise credibility of outcomes
- 1.3 Select and use research strategies appropriate to client group, subject matter being researched, the outcomes sought and the resources available
- 1.4 Ensure research plan incorporates strategies for validating research outcomes

2. Implement appropriate research strategies

- 2.1 Select and use research strategies appropriate to subject matter being researched, the outcomes sought and the resources available
- 2.2 Determine and allocate resources needed to conduct research
- 2.3 Ensure collection, recording and storage of all relevant information is timely and will ensure validity, confidentiality and security
- 2.4 Identify a representative range of people and groups with an interest in the issues and consult them in appropriate ways to ensure validity of outcomes
- 2.5 Undertake consultation according to agreed practices and protocol of own and other agencies
- 2.6 Consider cultural sensitivities and ethical issues in

ELEMENT	PERFORMANCE CRITERIA
	all consultation
3. Organise and analyse information	<p>3.1 Organise information in a form that allows analysis and suits the research purposes</p> <p>3.2 Develop patterns in the data and derive explanations, maintaining validity and reliability</p>
4. Report the findings of the research	<p>4.1 Report complete and accurate details of the research methodology, information and analysis in an accessible and useable style and format</p> <p>4.2 Provide opportunities for validation of research findings</p> <p>4.3 Report research results and make them available to all relevant stakeholders</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

These include knowledge of:

- Current and suitable research methodologies, including community based research and participatory research
- Research interview techniques, including consultation methods, protocols and practice
- Information systems, manual and electronic
- Report presentation
- Cultural implications of research methods
- Cultural analysis of information
- Cultural knowledge and ownership issues

- Research ethics

Essential skills:

It is critical that the candidate demonstrate the ability to:

- Carry out research activities that are directly relevant to the organisation and/or the community

In addition, the candidate must be able to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

These include the ability to:

- Demonstrate application of skills in:
 - consultation methods
 - complex communication
 - negotiation with a wide range of known and unknown stakeholders
 - interpretation and analysis of data
 - networking
 - written/oral presentation
- Utilise relevant information technology effectively in line with work health and safety (WHS) guidelines

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate this unit of competency:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- This unit is most appropriately assessed in the workplace or in a simulated workplace and under the normal range of workplace conditions
This may include the use of languages other than English and alternative communication systems
- It is recommended that assessment take place on one or more occasions but must include all aspects of research activities - preparing, implementing, analysing, and reporting on research

- Access and equity considerations:*
- All workers in community services should be aware of access, equity and human rights issues in relation to their own area of work
 - All workers should develop their ability to work in a culturally diverse environment
 - In recognition of particular issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on Aboriginal and Torres Strait Islander people
 - Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on Aboriginal and/or Torres Strait Islander clients and communities

- Context of and specific resources for assessment:*
- This unit can be assessed independently, however holistic assessment practice with other community services units of competency is encouraged
 - Resource requirements for assessment of this unit include access to:
 - an appropriate workplace where assessment can take place, or simulation of realistic workplace setting for assessment

- Method of assessment:*
- Assessment may include observations, questioning and evidence gathered from the workplace

Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

- The contexts for undertaking research may include:*
- Preparation of a range of organisation information for policy development, strategic planning, marketing and promotion services, planning new services, reviewing existing services, providing advice to

management

- Responsibility for research specific to a service, its stakeholders, interests and relationship with the wider community
- Specific community or client interests and issues

Stakeholders may be:

- Within the organisation
- Within the community
- In other areas of delivery and other services, agencies
- In the education/training field
- Other specialists
- Management
- Community leaders
- Recipients of the service delivery

Unit Sector(s)

Not Applicable

CPCBC4001A Apply building codes and standards to the construction process for low rise building projects

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies the outcomes required to access, interpret and apply relevant building codes and standards applicable to the construction processes of residential and low rise commercial buildings (low rise' licensing classification with reference to Class 1 and 10 construction and Classes 2 to 9 with a gross floor area not exceeding 2000 square metres, not including Type A or Type B construction).

To successfully construct low rise buildings requires a thorough knowledge of the purpose and content of the Building Code of Australia (BCA), coupled with the ability to interpret other codes and standards related to a specific building.

Application of the Unit

Application of the unit

This unit of competency supports builders, site managers and related construction industry professionals responsible for ensuring compliance with building codes and standards in the residential and commercial construction industry.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | ELEMENT | PERFORMANCE CRITERIA |
|---|---|
| 1. Access and interpret relevant code and standard requirements. | <p>1.1.Relevant performance requirements from the BCA that apply to individual projects (described as <i>low rise</i>) are identified.</p> <p>1.2.Requirements of relevant BCA deemed-to-satisfy (DTS) provisions are determined.</p> <p>1.3.Requirements of relevant Australian standards referenced in the BCA are accessed and interpreted accordingly.</p> |
| 2. Classify buildings. | <p>2.1.Nature of a building is determined according to its use and arrangement.</p> <p>2.2.BCA criteria to determine the defined classification are applied.</p> <p>2.3.BCA requirements for multiple classification are identified and interpreted.</p> |
| 3. Analyse and apply a range of solutions to a construction problem for compliance with the | <p>3.1.Range of criteria that will ensure that construction methods comply with BCA performance requirements is determined.</p> <p>3.2.Alternative solutions to a design or construction problem that will comply with BCA requirements are</p> |

ELEMENT	PERFORMANCE CRITERIA
BCA.	discussed and proposed in accordance with company policies and procedures. 3.3. Performance-based solutions are identified and documented in accordance with BCA requirements. 3.4. <i>Assessment methods</i> referenced in the BCA to determine whether a building solution complies with <i>performance requirements</i> or DTS provision of the BCA are analysed and applied. 3.5. Relevant documentation is identified and completed in accordance with BCA requirements.
4. Apply fire protection requirements.	4.1. Passive and active fire control elements for low rise building required by the BCA and other legislation are identified and applied. 4.2. Level of fire resistance required for the construction of various low rise buildings is determined. 4.3. Check of existing buildings for compliance with passive and active fire protection requirements is carried out in accordance with BCA requirements.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- analysis and interpretation skills relating to documentation from a wide range of sources, including BCA and referenced documents
- application of design concepts and principles in accordance with BCA, namely:
 - Class 1 and 10
 - Classes 2 to 9 with a gross floor area not exceeding 2000 square metres, not including Type A or Type B construction
- attention to detail in applying building codes and standards
- communication skills to:
 - discuss and propose alternative solutions
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand

REQUIRED SKILLS AND KNOWLEDGE

- read and interpret:
 - documentation from a variety of sources, including BCA and referenced documents
 - drawings and specifications
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication
- written skills to complete documentation in accordance with BCA requirements
- numeracy skills to interpret and apply mathematical information included in building codes and standards.

Required knowledge

Required knowledge for this unit is:

- basic design principles and the behaviour of structures under stress, strain, compression, bending or combined actions
- BCA performance hierarchy
- definitions and common technical terms or usage specified under general provisions of BCA
- general nature of materials and the effects of performance
- relevant Australian standards
- relevant legislative and OHS requirements, codes and practices
- types of working drawings and specifications
- understanding of the BCA relating to:
 - Class 1 and 10
 - Classes 2 to 9 with a gross floor area not exceeding 2000 square metres, not including Type A or Type B construction.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed by the application of design principles and solutions specified in BCA performance requirements or DTS provisions applicable to a building project.

This unit of competency can be assessed in the

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	<p>workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none">• comply with organisational quality procedures and processes• apply and interpret relevant documentation and codes• accurately apply BCA performance requirements relating to the design and construction of a building• understand assessment methods available to determine compliance with the BCA• identify faults and problems and proposed action to rectify.
Context of and specific resources for assessment	<p>This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.</p> <p>Assessment of essential underpinning knowledge will usually be conducted in an off-site context.</p> <p>Assessment is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none">• access to BCA and relevant documents referenced in the BCA• access to relevant legislation• project documentation, including design brief, design drawings, specifications, construction schedules and other supporting documents• research resources, including product information and data• relevant computer software package and suitable hardware. <p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to</p>

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modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing

EVIDENCE GUIDE

supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Low rise is described as falling within the BCA classes:

- Class 1 and 10
- Classes 2 to 9 with a gross floor area not exceeding 2000 square metres, not including Type A or Type B construction.

Assessment methods include:

- comparison with BCA DTS provisions
- evidence of suitability as described in the BCA
- expert judgement as defined in the BCA
- verification method as defined in the BCA.

Performance requirements include:

- performance requirements contained within other legislation applicable to a specific project
- performance requirements of the BCA determined to be relevant to a specific project
- performance-based contractual requirements that must be fulfilled by any party.

Unit Sector(s)

Unit sector

Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCBC4004A Identify and produce estimated costs for building and construction projects

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to establish the estimated costs associated with the acquisition of materials and labour on building and construction sites, together with the application of relevant overhead costs and margins. Knowledge of physical resource and supplier identification, assessment of the availability of and requirements for skilled labour and application of appropriate codes, regulations and approvals gaining processes is essential.

Application of the Unit

Application of the unit This unit of competency supports the needs of estimators, builders, managers and trade contractors within the construction industry responsible for producing estimated costs for labour, materials, overheads and on-costs on various residential and commercial construction projects within their scope of work as a trade contractor or builder.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Read and interpret plans and specifications.	<p>1.1. Appropriate plans and drawings are correctly identified.</p> <p>1.2. Project <i>plans and specifications</i> are read and understood.</p> <p>1.3. Levels, heights, gradients and other measurements are interpreted.</p> <p>1.4. Measurements are made and quantities identified from plans and specifications that conform to standard industry practice.</p>
2. Identify and calculate labour costs.	<p>2.1. Types and numbers of appropriate on-site personnel are identified and the time required on site is estimated.</p> <p>2.2. Labour hours for non-contract elements of on-site work are calculated.</p> <p>2.3. Costs or rates for required on-site work are calculated.</p>
3. Identify and establish physical resource requirements.	<p>3.1. Physical resource requirements are identified.</p> <p>3.2. Lists of materials are produced and quantities calculated.</p> <p>3.3. Quantities are established against project or standard construction contracts.</p> <p>3.4. Supplier prices for materials and consumables are</p>

ELEMENT

PERFORMANCE CRITERIA

	obtained.
	3.5.Plant or equipment requirements are identified and costed.
4. Develop estimated project costs.	4.1.Appropriate labour rates and material costs are selected and applied.
	4.2.Estimates of <i>unit costs</i> are determined and applied as appropriate.
	4.3.Costs to the project of WorkCover, Environmental Protection Agency (EPA) requirements, seeking approvals, waste management site fees and other statutory or additional costs are identified and applied.
	4.4.Company overhead recovery and margins are applied.
	4.5.Completed estimated <i>project costs</i> are calculated for inclusion in a tender or bill.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - read and interpret drawings and specifications
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
- contractual arrangement problem solving
- estimate labour and materials costs from written information
- numeracy skills to calculate labour hours and costs, material quantities and costs
- use appropriate costing software programs.

Required knowledge

Required knowledge for this unit is:

REQUIRED SKILLS AND KNOWLEDGE

- how to access and interpret:
 - national codes, including Building Code of Australia (BCA) and the Plumbing Code of Australia
 - Australian standards relevant to the industry sector
- includes state or territory and local government building and construction codes, standards and government regulations relevant to the form of building or construction being undertaken (e.g. WorkCover and EPA)
- types of building and construction drawings and specifications
- types, scope and usage of labour through the employee and subcontractor systems
- operation and structure of the organisation's costing and contracting system.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed by the preparation of a detailed estimate of labour, materials and other project costs as part of the preparation of a tender or bill for a residential or commercial construction project relevant to the specific trade or sector.

This unit of competency can be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- identify materials required for a project
- gather information about material supply
- interpret measurements and calculate quantities and costs

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- plan and allocate human resources
- identify and cost other related costs, such as those required to meet statutory and planning approval processes
- produce documentation that meets the timeframes and quality standards established by the organisation
- communicate effectively, both verbally and in writing.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- documentation that should normally be available in either a building or construction office
- relevant codes, standards and government regulations
- office equipment, including calculators, photocopiers and telephone systems
- computers with appropriate software to view 2-D CAD drawings, run costing programs and print copies
- a technical reference library with current publications on measurement, design, building construction and manufacturers' product literature
- a suitable work area appropriate to the construction process.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of

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the Construction, Plumbing and Services Training Package

- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Plans and specifications include:

- building codes
- materials lists and quantity schedules
- materials specifications
- sketches or drawings
- statements of requirements.

Plant or equipment requirements include:

- communications equipment
- conveyors
- heavy equipment, such as wheeled and tracked earthmoving equipment, trucks and articulated vehicles
- hoists
- mobile and tower cranes
- on-site equipment, such as:
 - compressors
 - pumps
 - generators
 - portable lighting
 - lifting equipment
 - portable compaction equipment.

Unit costs may include the cost of:

- construction cost per square metre
- installation of pipes per metre
- installation of sanitary ware per unit
- laying of foundation per metre
- laying of slabs per square metre
- laying of steel tray roofing per square metre
- masonry walls per square metre
- painting per square metre
- tiling per square metre.

Project costs include:

- building or construction materials
- communications costs
- cost of meeting statutory requirements, e.g. EPA

RANGE STATEMENT

- fuels, lubricants and consumables
- organisational and subcontract labour hours
- overheads
- project administration costs
- site facilities, such as:
 - offices
 - toilets
 - lunch rooms
- waste removal fees.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCBC4005A Produce labour and material schedules for ordering

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to produce schedules of resource requirements so that orders can be placed for materials and labour for residential and commercial projects and to record and track costs as they are incurred. Knowledge of codes, regulations and approval processes, contractor systems, physical resource and supplier identification and the ability to assess the availability of and requirements for skilled labour are essential.

Application of the Unit

Application of the unit This unit of competency supports the needs of site managers and forepersons, estimators, project managers and builders in the construction industry with a responsibility for producing schedules for ordering materials and labour.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Identify and apply all contract conditions to the schedules.	1.1.All contractual requirements are included in the schedules. 1.2. <i>Local government and regulatory bodies</i> ' conditions of approval are included in the schedules. 1.3.Schedules include colour selections. 1.4.Variations to contracts, raised by the client or the builder, are included in the schedules.
2. Produce material and labour schedules, overlays and orders.	2.1.Nominated suppliers and contractors are detailed in work schedules. 2.2.Relevant overlay drawings are produced. 2.3.Orders include contract details and instructions. 2.4.Contract rates are applied to material and labour schedules.
3. Prepare site files.	3.1.All necessary site documents are included, including approved <i>plans and specifications</i> . 3.2.Call forward sheets are prepared detailing all orders.
4. Monitor and report on project costs.	4.1. <i>Project costs</i> are analysed against estimates during construction. 4.2.Approved variation costs are analysed. 4.3.Final project cost analysis is provided.
5. Maintain data files of	5.1.Approved variation cost increases are incorporated

ELEMENT	PERFORMANCE CRITERIA
standard costs.	into site files. 5.2.Changes to standard plans, specifications and cost files are included in site files.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - communicate information effectively within the organisation and to external agencies and the client
 - read and interpret:
 - contracts
 - drawings and specifications
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
 - written skills to:
 - prepare and maintain site files
 - produce schedules and orders
- identify and analyse relevant information
- numeracy skills to apply calculations.

Required knowledge

Required knowledge for this unit is:

- operation and structure of the organisation's costing and contracting system
- state or territory building and construction codes, standards and regulations relevant to the form of building or construction being undertaken
- types of building or construction drawings and specifications commonly used in the industry
- types, scope and usage of labour through the employee and contractor systems.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed by the preparation of schedules for materials and labour for a building project.

This unit of competency can be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- identify materials required for the project and gather supply information effectively
- plan and allocate human and physical resources
- produce documentation that meets the timeframes and quality standards established by the organisation
- communicate information effectively within the organisation and to external agencies and the client, as required.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- documentation that should normally be available in a building or construction office

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- relevant codes, standards and regulations
- office equipment, including calculators, photocopiers and telephone systems
- computers with appropriate software to view 2-D CAD drawings, run costing programs and print copies
- a technical reference library with current publications on measurement, design, building construction and manufacturers' product literature
- a suitable work area appropriate to the construction process.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with

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a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Local government and regulatory bodies include:

- electricity regulatory authorities
- environmental authorities
- health departments
- shire or municipal councils
- water corporations.

Plans and specifications include:

- building codes
- colour selections
- contract requirements
- material and labour schedules
- materials specifications
- plans, sketches and drawings

RANGE STATEMENT

Project costs include:

- statements of requirements.
- building or construction materials
- communications costs
- fuels, lubricants and other consumables
- organisational and subcontract labour costs
- overheads
- professional indemnity and other insurance costs
- project administration costs
- site facilities, such as toilets and storage sheds.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCBC4014A Prepare simple building sketches and drawings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to produce sketches and drawings. The sketches may be used to clarify or communicate ideas to clients or other parties. They may also be simplified versions taken from architectural drawings, designed to capture design concepts or options. The sketches may be used for estimating purposes and to show measurements and other requirements for building and construction works. This unit does not describe more complex drafting skills.

Application of the Unit

Application of the unit This unit of competency supports the needs of builders, experienced tradespersons, project managers and estimators with a responsibility for preparing sketches and drawings.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare to make sketches and drawings.	1.1. <i>Types of drawings required</i> and <i>key features</i> to be recorded are identified in compliance with the scope and standard of the job being undertaken. 1.2. <i>OHS requirements</i> on site are identified and followed. 1.3. <i>Tools and equipment</i> required for inspection and measurement and for producing drawings are gathered and checked for serviceability.
2. Create simple sketches and drawings.	2.1. Inspection of relevant area is carried out as required and measurements are taken and recorded. 2.2. Simple two and three-dimensional sketches and drawings are created using <i>standard drawing conventions</i> and incorporating relevant codes and standards. 2.3. Sectional drawings of simple structural elements are created using standard drawing conventions.
3. Notate and process drawings.	3.1. Essential information is recorded on the drawing with symbols and abbreviations according to standard drawing conventions. 3.2. Drawings are labelled, dated and processed according to organisational administration and quality procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
- drawing techniques
- interpret and apply relevant standards and codes
- numeracy skills to apply measurements and calculations.

Required knowledge

Required knowledge for this unit is:

- drawing conventions and features, including direction, scale, key, contours, symbols and abbreviations
- requirements of the relevant codes, standards, statutory and authority requirements
- safe work methods.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed by creating a set of sketches and drawings for a small work project in the relevant field of expertise.

Measurements of components, sub-assemblies, products, models, equipment, layouts or facilities needed for the preparation of the required

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drawings and calculations of required dimensions and other drafting details based on the measurements and other relevant information should be made and recorded.

This unit of competency can be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- produce clear and effective drawings and sketches with appropriate notations and labelling
- apply appropriate techniques for making inspections and taking measurements
- make good incursions into the fabric of a building
- comply with OHS regulations applicable to workplace operations
- apply organisational quality procedures and processes
- select and use appropriate processes, tools and equipment.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include access to:

- an appropriate work site
- appropriate documentation and data related to tasks
- scaffolding and fall protection equipment
- tools and equipment relevant to activity

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process.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in

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relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Types of drawings required include:

- floor plan
- land boundaries and footprint of building
- orthographic drawings
- schematic drawings of wiring and pipe work
- sectional views.

Key features to be recorded may include:

- ceiling heights and variations
- doors
- light fittings and power supplies
- services
- wall penetrations
- walls.

OHS requirements include:

- detailing appropriate installation of scaffolding
- detailing power supplies
- details of all services
- understanding hazards located in the area
- use of personal protective equipment.

Tools and equipment include:

- recording devices, including:
 - computer
 - digital camera
 - pen and paper.

Standard drawing conventions

- standard design symbols common to the

RANGE STATEMENT

include: building and construction industries.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCBC4024A Resolve business disputes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to advise on or resolve business disputes that may arise in the course of activities in residential and commercial contracting projects. Dispute resolution procedures may be applied as one of the disputing parties or as an independent party.

Application of the Unit

Application of the unit This unit of competency supports the needs of builders, site managers and forepersons, estimators, managers and other construction industry personnel responsible for ensuring that business disputes are resolved in a positive manner.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop and implement dispute resolution procedures.	<p>1.1. Established business <i>dispute resolution procedures</i> are reviewed and implemented as appropriate.</p> <p>1.2. Business dispute resolution procedures are developed where required and documented, and agreement to procedures is secured from all parties.</p> <p>1.3. Recording procedures are established and provision for record keeping is made.</p> <p>1.4. External arbitrators or conciliators are identified for consultation when disputes cannot be resolved internally.</p>
2. Conduct an initial investigation into business disputes and possible resolution strategies.	<p>2.1. Nature and <i>cause of business disputes</i> are identified and documented.</p> <p>2.2. Parties to dispute are identified and approached individually, and the issues are clarified and documented.</p> <p>2.3. Solutions based on an examination of the information collected and with reference to contractual arrangements are suggested.</p>
3. Identify opportunities for dispute resolution.	<p>3.1. Efforts are made to bring the disputing parties together.</p> <p>3.2. Where necessary, external arbiters or conciliators are consulted.</p> <p>3.3. Relevant statutory laws are identified, applied and followed.</p> <p>3.4. Disputes are resolved in accordance with common law.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
 - communicate by telephone
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - research and evaluate information and circumstances surrounding a business dispute
 - read and interpret relevant legislation
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
 - written skills to:
 - complete checklists
 - send emails and faxes
 - write memos and reports
- negotiation relevant to dispute resolution situations
- problem solving in the context of dispute resolution
- research and evaluate information and circumstances surrounding a business dispute.

Required knowledge

Required knowledge for this unit is:

- contractual and business frameworks underpinning the building and construction industry
- mores, values and attitudes of various groups in the community that should be accounted for in discussions
- possible reactions from persons under pressure, such as anger and withdrawal.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed by developing a set of dispute resolution procedures and demonstrating how these would apply to a selection of disputes.

This unit of competency can be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- identify the nature of the dispute and the identity of the parties to the dispute
- document the details of the dispute in sufficient terms for an unambiguous evaluation of the issues to occur
- identify and follow established dispute resolution procedures
- develop and implement dispute resolution procedures, where there are none established.
- understand need to remain completely impartial in any involvement in a dispute.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- documentation that should normally be available in either a building, construction or civil contracting office

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- relevant codes, standards and government regulations
- suitable work area appropriate to the construction process.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

EVIDENCE GUIDE

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Dispute resolution procedures
include:

- arbitrated decisions
- common law outcomes
- litigated decisions
- mutual resolution
- on-site negotiations
- reference to contractual obligations.

Cause of business disputes
includes:

- contract payment issues
- different opinions about design, structural layout or dimensions
- dissatisfaction with project progress
- structural finish, quality, materials or construction methodology.

Unit Sector(s)

Unit sector

Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCCCA3006B Erect roof trusses

Modification History

Change to performance criterion

Equivalent to CPCCCA3006A

Added range item: solar panels

Unit Descriptor

This unit of competency specifies the outcomes required to select, set out, erect and brace roof trusses to accommodate roof coverings for waterproofing purposes. It includes gable, hip and valley, and hip roofing types.

Application of the Unit

This unit of competency supports achievement of skills to safely and efficiently erect pre-built roof trusses for gable, hip and valley, hip and flat roof construction projects, which includes working with others and as a member of a team.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

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

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|---------------------|-----|--|
| 1 | Plan and prepare. | 1.1 | Work instructions, including plans, specifications, quality requirements and operational details, are obtained, confirmed and applied from relevant information for planning and preparation purposes. |
| | | 1.2 | Safety (OHS) requirements are followed in accordance with safety plans and policies. |
| | | 1.3 | Signage and barricade requirements are identified and implemented. |
| | | 1.4 | Plant, tools and equipment selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement. |
| | | 1.5 | Material quantity requirements are calculated in accordance with plans, specifications and quality requirements . |
| | | 1.6 | Materials appropriate to the work application are identified, obtained, checked to ensure fitness for purpose, prepared, safely handled and located ready for use according to Australian standards. |
| | | 1.7 | Environmental requirements are identified for the project in accordance with environmental plans and statutory and regulatory authority obligations, and are applied. |
| 2 | Erect roof trusses. | 2.1 | Location of roof trusses for hip and valley roofs are set out on wall top plates to plan layout and specifications. |
| | | 2.2 | Steel frames are temporarily earthed during erection and are connected to permanent earthing system upon completion. |
| | | 2.3 | Roof trusses are erected and fixed, including temporary bracing, to set out positions in correct sequence to line at apex and plumb. |

- 2.4 Top chord is installed above wall plate to be constant height above wall plate.
 - 2.5 Ceiling trimming and creeper rafter members are fixed to specifications.
 - 2.6 Bottom chord of truss is used to provide lateral support for internal walls.
 - 2.7 **Roof bracing** is provided through hip construction, valley construction, diagonal metal tension or timber bracing or a combination of these, and fixed to specification.
 - 2.8 Lateral restraints to truss chords are fixed in position to manufacturer specifications.
- 3 Clean up.
 - 3.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.
 - 3.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
 - determine requirements
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - read and interpret:
 - documentation from a variety of sources
 - plans, specifications and drawings
 - report faults

- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication, such as hand signals
- numeracy skills to apply measurements and make calculations
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
 - use a range of mobile technology, such as two-way radio and mobile phones
 - voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

- construction terminology
- job safety analysis (JSA) and safe work method statements
- material safety data sheets (MSDS)
- materials storage and environmentally friendly waste management
- plans, specifications and drawings
- plant, tools and equipment types, characteristics, uses and limitation
- processes for the calculation of material requirements
- quality requirements for roof trusses
- roof bevels
- roof calculations for lengths, quantities and pitch
- roof load transfer
- roof shape and geometry
- roof truss erection and construction techniques
- roof truss materials and installation, including fire control and separation materials required by the National Construction Code (NCC) and other legislation
- roof types and truss components
- roofing regulations
- techniques for lifting and positioning of trusses
- temporary and permanent bracing
- timber types, structural properties and uses, including engineered timber products
- truss set out
- workplace and equipment safety requirements.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan, OHS regulations and state and territory legislation applicable to workplace operations
- comply with organisational policies and procedures, including quality requirements
- safely and effectively use tools, plant and equipment
- communicate and work effectively and safely with others
- set out and erect a roof comprising a minimum of one hip end, a valley and enough standard trusses to incorporate bracing for a full size roof in timber and metal.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity

- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the

competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions where specified
- memos
- MSDS
- organisation work specifications and requirements
- plans and specifications
- regulatory and legislative requirements pertaining to erecting roof trusses
- relevant Australian standards
- safe work procedures related to erecting roof trusses
- signage
- verbal or written and graphical instructions
- work bulletins
- work schedules.

Planning and preparation include:

- work site inspection
- equipment defect identification
- assessment of conditions and hazards
- determination of work requirements.

Safety (OHS) is to be in accordance with state or territory legislation, regulations, codes of practice, organisational safety policies and procedures, and project safety plan and may include:

- emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation
- handling of materials
- hazard control
- hazardous materials and substances
- safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
 - earth leakage boxes
 - lighting
 - photovoltaic (solar) panels
 - power cables, including overhead service trays, cables and conduits
 - restricted access barriers
 - surrounding structures
 - traffic control
 - trip hazards
 - work site visitors and the public
 - working at heights
 - working in confined spaces
 - working in proximity to others
 - working with dangerous materials
- organisational first aid
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- use of firefighting equipment
- use of tools and equipment
- workplace environment and safety.

Tools and equipment include:

- air compressors and hoses
- clamps
- hammers
- marking equipment
- measuring tapes and rules
- nail bags
- nail guns
- power drills
- power leads
- power saws

- saw stools
- scaffolding
- screwdrivers
- spanners
- spirit levels
- squares (combination/tri)
- string lines
- welding equipment.

Quality requirements include relevant regulations, including:

- Australian standards
- internal company quality policy and standards
- manufacturer specifications, where specified
- workplace operations and procedures.

Materials include:

- bolts
- bracing material
- nails
- patented fasteners
- screws
- slotted brackets for truss movement
- timber and metal trusses.

Environmental requirements include:

- clean-up protection
- noise and dust
- vibration
- waste management.

Statutory and regulatory authorities include:

- federal, state and local authorities administering applicable Acts, regulations and codes of practice.

Roof trusses can be:

- timber or metal
- fixed to timber or steel wall plates.

Hip and valley roofs:

- include scotch valleys and hip ends
- may include Dutch gables.

Roof bracing includes:

- elementary bracing principles for various shaped roofs.

Unit Sector(s)

Functional area

Unit sector Construction

Custom Content Section

Not applicable.

CPCCCM1015A Carry out measurements and calculations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to carry out measurements and perform simple calculations to determine task and material requirements for a job in a construction work environment.

Application of the Unit

Application of the unit This unit of competency supports achievement of skills to take measurements and use these to calculate material qualities and calculations for related tasks commonly used and applied in construction work.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare.	<p>1.1. Work instructions are confirmed and applied using relevant <i>information</i>.</p> <p>1.2. <i>Safety (OHS)</i> requirements are obtained from site safety plan, other regulatory specifications or legal obligations, and are applied.</p> <p>1.3. Measuring and calculating <i>equipment</i> selected to carry out tasks is consistent with job requirements, is checked for serviceability, and any faults are rectified or reported.</p>
2. Obtain measurements.	<p>2.1. Method of obtaining the measurement is selected and applied.</p> <p>2.2. <i>Measurements</i> are obtained using a rule or tape accurate to 1mm.</p> <p>2.3. Measurements, including <i>areas and volumes</i>, are confirmed and recorded.</p>
3. Perform calculations.	<p>3.1. Appropriate <i>calculation factors</i> are determined and correct method is selected for achieving required result.</p> <p>3.2. <i>Material quantities</i> for the project are correctly calculated using appropriate factors.</p> <p>3.3. Results are confirmed and recorded.</p>
4. Estimate approximate quantities.	<p>4.1. Calculations for determining material requirements are taken.</p> <p>4.2. Appropriate formulas for calculating quantities are selected.</p> <p>4.3. Quantities are estimated from the calculations taken.</p> <p>4.4. Material quantities for the project are calculated,</p>

ELEMENT**PERFORMANCE CRITERIA**

confirmed and recorded within enterprise tolerances.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
 - determine requirements
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - read and interpret:
 - documentation from a variety of sources
 - drawings and specifications
 - report faults
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
 - written skills to record measurements, calculations and quantities
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- numeracy skills to apply measurements, calculations and geometry
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
 - use a range of mobile technology, such as two-way radio and mobile phones
 - voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

- basic calculators
- communication devices

REQUIRED SKILLS AND KNOWLEDGE

- company procedures
- construction terminology
- job safety analysis (JSA) and safe work method statements
- measuring, calculating, geometry and determination of quantities
- processes for care of measuring equipment
- project quality requirements
- site and equipment safety (OHS) requirements
- tolerances.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information
- comply with site safety plan, OHS regulations and state and territory legislation applicable to workplace operations
- comply with organisational policies and procedures, including quality requirements
- safely and effectively use tools and equipment
- communicate and work effectively and safely with others
- complete measurements, calculations and determination of quantities for different projects of varying complexity in a range of contexts or occasions over time

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- calculate each of the following using a realistic construction task or example:
 - length
 - perimeter
 - circumference
 - area
 - volume
 - number
 - ratio
 - percentage
 - conversion of metres to millimetres and millimetres to metres
 - measure using a rule or tape measure five separate tasks within 1mm accuracy.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

EVIDENCE GUIDE

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions
- maps
- material safety data sheets (MSDS)
- memos
- organisation's work specifications and requirements
- plans and specifications
- regulatory and legislative requirements
- relevant Australian standards
- safe work procedures or equivalent
- signage
- verbal or written and graphical instructions
- work bulletins
- work schedules.

Safety (OHS) is to be in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan and may include:

- clothing and equipment
- handling of materials
- hazard control
- hazardous materials and substances
- organisational first aid
- use of firefighting equipment
- use of tools and equipment
- workplace environment and safety.

Equipment includes:

- calculators and laser equipment
- rulers
- tape measures
- trundle wheels.

Measurements are to:

- be in metric scale
- cover all necessary calculations.

Areas and volumes include:

- calculating regular and irregular shapes, such as rectangles, squares, circles, triangles,

RANGE STATEMENT

trapeziums, cubes, cones, pyramids and cylinders that represent calculations taken in a construction environment.

Calculation factors:

- include length, area, weight, height, width, depth, volume, mass, scales, ratios, perimeters, quantities, numbers, grade, percentages, addition, subtraction, multiplication and division
- are to be performed manually and with the aid of a calculator.

Material quantities are to be:

- calculated in either packed, bulk, loose or compacted states
- converted to volumes in the other states.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCCLDG3001A Licence to perform dogging

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit specifies the outcomes required to perform slinging techniques, including the selection and inspection of lifting gear and/or the directing of the crane operator in the movement of the load when the load is out of view of the crane/ operator for licensing purposes.

Application of the Unit

Application of the unit This unit covers the scope of work to demonstrate competency in the application of slinging techniques, selection and inspection of lifting gear and/or the directing of the crane/ operator in the movement of the load.

This unit is based upon the National Standard for Licensing Persons Performing High Risk Work.

This unit in its current form meets state and territory licensing requirements. Any alteration will result in a unit which is not acceptable to regulators for the purpose of licensing.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan job.	<p>1.1. <i>Site information</i> is obtained and related to the task.</p> <p>1.2. <i>Hazard</i> s and potential hazards associated with the slinging and directing of loads are identified.</p> <p>1.3. <i>Hazard control measures</i> consistent with <i>appropriate standards</i> are identified to ensure the safety of personnel and equipment.</p> <p>1.4. The weight, dimensions and centre of gravity of the load are identified and assessed.</p> <p>1.5. Suitable lifting/slinging points on the load are identified.</p> <p>1.6. Appropriate <i>lifting equipment</i> needs are assessed.</p> <p>1.7. Appropriate <i>communication methods</i> are assessed with <i>crane/</i> operators and other <i>appropriate personnel</i>.</p> <p>1.8. Manufacturer's specifications/information is obtained for special loads where necessary.</p>
2. Select and inspect equipment.	<p>2.1. Lifting equipment appropriate to the task is selected.</p> <p>2.2. Lifting equipment is inspected for serviceability.</p> <p>2.3. Damaged or excessively worn lifting equipment is identified, labelled and rejected.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Appropriate communication methods for the crane/operator and appropriate personnel are selected.
	2.5. Appropriate <i>communication equipment</i> is selected and its serviceability is checked.
	2.6. Appropriate <i>personal protective equipment</i> (PPE) is selected and checked.
3. Prepare site and equipment.	3.1. Hazard prevention/control measures are applied consistent with appropriate standards to ensure the safety of personnel and equipment.
	3.2. Appropriate slinging method is selected.
	3.3. Lifting equipment is prepared and assembled where appropriate.
	3.4. Load destination is prepared.
4. Perform task.	4.1. Lifting equipment is attached and secured to the lifting hook using appropriate techniques.
	4.2. Lifting hook is positioned over the load centre of gravity.
	4.3. Lifting equipment is attached and secured to the load in an appropriate manner.
	4.4. Tag line is attached and secured where appropriate.
	4.5. Test lift is conducted to ensure security of load.
	4.6. Load is moved maintaining stability and control at all times.
	4.7. Appropriate communication methods and <i>communication signals</i> are applied to safely coordinate the load movement both within sight and out-of-sight of crane operator.
	4.8. The load is landed to ensure that it is stable and secure from movement.
	4.9. Lifting equipment is removed or disconnected from load and prepared for next task or storage.
5. Shut down job and clean up.	5.1. Unserviceable lifting equipment inspected and rejected.
	5.2. <i>Defective equipment</i> is isolated and tagged.
	5.3. Lifting equipment is stored in accordance with procedures and appropriate standards.
	5.4. Hazard prevention/control measures are removed where appropriate.
	5.5. Excess materials from the work area are removed (where applicable).

ELEMENT**PERFORMANCE CRITERIA**

5.6. Defects are reported and recorded according to procedures and appropriate action is taken.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication techniques in the workplace including whistles, hand signals and use of fixed channel two-way radios
- communication skills at a level sufficient to communicate with other site personnel
- calculate rated capacity of lifting equipment
- apply different methods for making temporary connections to loads using fibre and synthetic ropes
- ability to interpret rated capacity and working load limit tags
- hazard identification and control
- slinging techniques
- selection and inspection of lifting equipment
- directing crane operators in the moving of loads in a safe manner, using a slewing crane
- inspection and care of a wide range of lifting equipment to appropriate Australian Standards and/or manufacturer's specifications.

Required knowledge

Required knowledge for this unit is:

- appropriate mathematical procedures for estimation and measurement of loads
- basic knowledge of types of cranes and their functions
- Commonwealth, state or territory OHS legislation, standards and codes of practice relevant to the full range of techniques for undertaking dogging activities
- load stability and safety factors in line with manufacturer's specifications
- types of lifting equipment and slinging techniques for use, and their limitations and performance in a wide range of conditions (including but not limited to slings, beams, accessories, clamps, work-boxes, bins and pallets)
- understanding of the hierarchy of control.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Successful assessment of this unit meets the competency requirement of the National Standard for licensing Persons Performing High Risk Work.

State/Territory OHS regulators have mandated the use of Assessment Instruments and Instructions for Assessment of this unit which have been endorsed by the national body responsible for OHS matters.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- comply with Commonwealth, state or territory OHS legislation, standards relevant to safe dogging and crane operations.
- communicate and work safely with others in the work area.
- apply Hazard prevention and control measures consistent with appropriate standards.
- apply to move loads in conjunction with cranes including, the reading of tags, slinging, loading, directing and landing loads with a slewing mobile crane with a telescopic boom and a winch, in and out of sight of the crane/operator, moving four loads of varying shapes, sizes and weights.
- use fibre and/or synthetic rope as tag lines, and connecting to loads using clove hitch, rolling hitch, bowline and single sheetbend.
- conduct pre and post operational checks of the lifting equipment.
- Assessment of the safe and effective application of knowledge and skill to workplace tasks (performance) must be undertaken using the national OHS endorsed Assessment Instrument
- Assessment of performance must be

Context of and specific resources for assessment

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undertaken either in the workplace or in a realistically simulated workplace setting

- Assessors must ensure that the assessment in the workplace is organised through a workplace supervisor to ensure that all the required equipment and materials and a suitable working area is made available to suit the assessment and the workplace
- Assessment must occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment is to comply with the requirements of any relevant Standards or operating procedures for dogging activities
- Applicants must have access to:
 - personal protective equipment (PPE) for the purpose of the performance assessment.
 - four different loads as prescribed in the endorsed assessment instrument
 - lifting and associated equipment
 - suitable slewing crane
 - communication equipment (eg. fixed channel, two-way radios) as applicable.

Method of assessment

Assessment must be conducted using the national OHS endorsed Assessment Instrument. This Instrument provides instruction on the application of the assessment.

Assessment may be in conjunction with the assessment of other units of competency.

The use of '**simulators**' in the assessment of this unit of competency is **not acceptable**.

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.

Assessment must confirm a reasonable inference that competency is not only able to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.

Guidance information for assessment

Further information about endorsed Assessment Instruments may be obtained from state/territory OHS regulators.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Site information may include but not be limited to

- local conditions such as access and egress
- work method statements.

Hazards may include but not limited to:

- ground stability (eg. ground condition, recently filled trenches, slopes)
- overhead hazards (e.g. power lines, service pipes, trees, buildings, etc)
- insufficient lighting
- traffic (e.g. pedestrians, vehicles, plant)
- weather (e.g. wind, lightning, storms)
- other specific hazards (e.g. trip hazards, heights, radio interference, etc).

Hazard prevention/control measures

The systematic process of eliminating or reducing the risk to personnel and property through the application of controls.

It includes the application of the hierarchy of controls, including:

1. elimination.
2. substitution.
3. isolation.
4. engineered control measures.
5. safe work practices.
6. personal protective equipment.

Appropriate standard s may include:

- codes of practice
- legislation
- Australian Standards
- manufacturer's specifications
- industry standards.

RANGE STATEMENT

Lifting Equipment may include but not limited to:

- fibre ropes
- wire ropes
- chain
- wire and synthetic slings
- shackles
- eyebolts
- beam clamps
- plate clamps
- spreader beams
- lifting beams
- pallet forks and cages
- concrete kibbles
- personnel boxes.

Communication Methods may include but are not limited to:

- written instructions
- signage,
- hand signals
- listening
- questioning to confirm understanding
- appropriate worksite protocol.

Cranes may include but not limited to:

- tower cranes (including self erecting)
- portal boom cranes
- vehicle loading cranes
- slewing mobile cranes
- non-slewing cranes
- derrick cranes.

Appropriate personnel may include but are not limited to:

- supervisors
- colleagues
- managers who are authorised to take responsibility for the workplace or operations.

Communication Equipment may include but not limited to:

- fixed channel two-way radios
- whistles
- bells.

Personal protective equipment (PPE) may include but not limited to:

- hard hat
- safety boots
- gloves
- high visibility clothing
- reflective vest
- relevant breathing, hearing, sight, skin and sun protection.

Load destination may include but

- ground

RANGE STATEMENT

not limited to:

- loading platforms
- suspended floors
- vehicles.

Communication signals may include but not limited to:

- stop - hand
- stop - whistle
- hoist up - hand
- hoist up - whistle
- hoist down - hand
- hoist down - whistle
- luff boom down - hand
- luff boom down - whistle
- luff boom up - hand
- luff boom up - whistle
- telescope out - hand
- telescope out - whistle
- telescope in - hand
- telescope in - whistle
- slew left - hand
- slew left - whistle
- slew right - hand
- slew right - whistle.

Defective Equipment may include but not limited to:

- excessive wear
- damage
- stretched
- broken wires
- cut/damaged fibres.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Co-requisite units Nil

Functional area

Functional area

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

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to carry out OHS requirements through safe work practices at any on or off-site construction workplace. It requires the performance of work in a safe manner through awareness of risks and work requirements, and the planning and performance of safe work practices with concern for personal safety and the safety of others.

Application of the Unit

Application of the unit This unit of competency covers fundamental OHS necessary to undertake work tasks within any sector in the construction industry. It includes the identification of hazardous materials, including asbestos, and compliance with legislated work safety practices. It does not cover removal of asbestos, which is a licensed activity.

The unit relates directly to the general induction training program specified by the *National Code of Practice for Induction for Construction Work* (ASCC 2007) required to enter a construction work site. Completion of unit CPCCOHS1001A covers this requirement.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Identify and assess risks. | 1.1. <i>Hazards</i> in the work area are identified, assessed and reported to <i>designated personnel</i> .
1.2. Safety risks in the work area are identified, assessed and reported to designated personnel.
1.3. <i>Safe work practices, duty of care</i> requirements and safe work instructions are followed for controlling risks.
1.4. OHS, hazard, accident or <i>incident</i> reports are contributed to according to workplace procedures and <i>Australian government and state or territory OHS legislation</i> and relevant <i>information</i> . |
| 2. Identify hazardous materials and other | 2.1. <i>Hazardous materials</i> on a work site are correctly identified and, if appropriate, handled and used |

ELEMENT

PERFORMANCE CRITERIA

hazards on work sites.	according to company and legislated procedures. 2.2. Measures for controlling risks and construction hazards are applied effectively and immediately. 2.3. Hazardous materials that have safety implications for self and other workers are secured immediately they are identified, using appropriate signs and symbols . 2.4. Asbestos-containing materials are identified on a work site and reported to designated personnel.
3. Plan and prepare for safe work practices.	3.1. Correct personal protective equipment and clothing for each area of construction work are identified, worn, correctly fitted, used and stored according to enterprise procedures. 3.2. Selection of tools, equipment and materials , and organisation of tasks are performed in conjunction with other personnel on site and in accordance with enterprise procedures. 3.3. Required barricades and signage are determined and erected at the appropriate site location. 3.4. Material safety data sheets (MSDS), and job safety analysis (JSA) and safe work method statements relevant to the work to be carried out are identified and applied.
4. Apply safe work practices.	4.1. Tasks are performed in a manner that is safe for operators, other personnel and the general community in accordance with legislative requirements, and enterprise policies and procedures. 4.2. Plant and equipment guards are used in accordance with manufacturer specifications, work site regulations and Australian standards where applicable. 4.3. Procedures and relevant authorities for reporting hazards, incidents and injuries are used. 4.4. Prohibited tools and equipment in areas with identified asbestos are recognised and not used. 4.5. Work site safety signs and symbols are identified and followed. 4.6. Work site area is cleared and maintained to prevent and protect self and others from incidents and accidents and to meet environmental requirements .
5. Follow emergency procedures.	5.1. Designated personnel are identified in the event of an emergency for communication purposes. 5.2. Safe workplace procedures for dealing with accidents,

ELEMENT

PERFORMANCE CRITERIA

various *types of fire* and other emergencies are followed, including identification or use, if appropriate, of *fire equipment* within scope of responsibilities.

5.3. *Emergency response and evacuation procedures* are known, practised and carried out effectively when required.

5.4. Emergency first aid treatment of minor injuries is carried out correctly and details of any treatment administered are reported accurately to designated personnel as soon as possible.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- ability to accurately recognise OHS hazards, including asbestos and take all opportunities to alleviate safety problems in a variety of construction work sites and environments
- capacity to deal calmly and effectively with any potential safety problems and work closely with other team members and supervisors to ensure safe working conditions are maintained
- communication skills to:
 - determine and report hazards and risks
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - read and interpret:
 - MSDS, JSA and safe work method statements
 - other relevant documentation
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
 - written skills to contribute to reports
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials

REQUIRED SKILLS AND KNOWLEDGE

- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
 - use a range of mobile technology, such as two-way radio and mobile phones
 - voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

- asbestos management code prevention of exposure
- basic first aid procedures
- common construction industry terminology
- common workplace safety hazards and risks and procedures for reporting these to designated personnel
- construction industry communications equipment and use
- construction industry health and safety signage
- emergency response and evacuation procedures
- JSA and safe work method statements
- MSDS
- OHS hierarchy of control and role of OHS committees and representatives
- relevant legislation, regulations and workplace requirements relating to OHS, including hazard reduction and personal safety, including duty of care responsibilities, workers' compensation and injury management requirements
- safe manual handling techniques
- safe work practices in normal working environment
- safety equipment, policies and requirements for working in confined spaces and at height, including on rooves
- tools and equipment prohibited for use near identified asbestos-containing materials (ACM)
- types of fires and basic firefighting equipment
- types, possible location and risks of ACM, including serpentine and amphibole groups, and their use in common building materials
- types, purpose and use of construction industry personal protective equipment and clothing
- workplace and equipment safety requirements.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- correctly locate, interpret and apply relevant information, standards and specifications
- comply with a site safety plan, organisational policies, OHS regulations and state and territory legislation applicable to workplace operations, including quality requirements
- correctly identify ACM and policies and procedures for reporting this to designated personnel
- effectively communicate and work safely with others
- apply general procedures for responding to incidents and reporting hazards and injuries
- select and use firefighting equipment to extinguish a simulated mechanical fire
- evacuate a site through simulated response to an emergency, complying with workplace procedures.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements

EVIDENCE GUIDE

- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct,

EVIDENCE GUIDE

indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Hazards include:

- chemical spills
- electrical safety work in confined spaces
- excavations, including trenches
- falling objects
- fires
- gases
- hazardous materials
- high or very low temperatures
- HIV and other infectious diseases
- liquids under pressure
- manual handling
- moving machinery and equipment
- noise, dust and vapours
- overhanging beams
- protrusions
- sharp equipment
- traffic
- ultraviolet (UV) radiation
- unplanned collapse

RANGE STATEMENT

Designated personnel to be contacted in case of an emergency, accident, fire or to report a risk such as identification of ACM are:

- working at heights.
- designated safety officers, determined by the enterprise, who have undertaken specific safety response training
- managers or other senior personnel
- personnel competent and/or licensed in the safe handling of asbestos
- supervisors.

Safe work practices:

- include:
 - day to day observation of OHS policies and procedures
 - emergency procedures
 - risk assessment
 - use of basic firefighting equipment
- relate to:
 - access to site amenities, such as drinking water and toilets
 - general requirements for safe use of plant and equipment
 - general requirements for use of personal protective equipment and clothing
 - housekeeping to ensure a clean, tidy and safer work area
 - no drugs and alcohol at work
 - preventing bullying and harassment
 - smoking in designated areas
 - storage and removal of debris.

Duty of care requirements:

- relate to:
 - legal responsibility under duty of care to do everything reasonably practicable to protect others from harm
 - relevant state and territory OHS requirements and include employers and self-employed persons, persons in control of the work site, construction supervisors, designers, manufacturers and suppliers, construction workers, subcontractors and inspectors
- may relate to:
 - own responsibilities to comply with safe work practices, including activities that

RANGE STATEMENT

require licences, tickets or certificates of competency.

Incidents include:

- accidents resulting in personal injury or damage to property
- near misses or dangerous occurrences that do not cause injury but may pose an immediate and significant risk to persons or property, and need to be reported so that action can be taken to prevent recurrence, for example:
 - breathing apparatus malfunctioning to the extent that the user's health is in danger
 - collapse of the floor, wall or ceiling of a building being used as a workplace
 - collapse or failure of an excavation more than 1.5 metres deep (including any shoring)
 - collapse or partial collapse of a building or structure
 - collapse, overturning or failure of the load bearing of any scaffolding, lift, crane, hoist or mine-winding equipment
 - damage to or malfunction of any other major plant
 - electric shock
 - electrical short circuit, malfunction or explosion
 - uncontrolled explosion, fire or escape of gas, hazardous substance or steam
 - any other unintended or uncontrolled incident or event arising from operations carried on at a workplace.

Australian government and state or territory OHS legislative requirements include:

- Australian standards
- construction industry OHS standards and guidelines
- duty of care
- health and safety representatives, committees and supervisors
- JSA and safe work method statements
- licences, tickets or certificates of competency
- National Code of Practice for Induction Training for Construction Work
- national safety standards

RANGE STATEMENT

Information includes:

- OHS and welfare Acts and regulations
- safety codes of practice.
- diagrams or sketches
- emergency situation contacts
- evacuation plans
- instructions issued by authorised organisational or external personnel
- labels
- manufacturer specifications and instructions
- memos
- MSDS
- organisation work specifications and requirements
- plans and specifications
- regulatory and legislative requirements, such as Acts, regulations and codes of practice
- relevant Australian standards
- reports of near misses or accidents
- safe work procedures or equivalent documentation
- safety meeting minutes
- signage
- verbal or written and graphical instructions
- work bulletins
- work schedules.

Hazardous materials include:

- ACM
- cleaning chemicals, including those in pressurised containers
- glues
- insulation materials
- solvents
- treated timber products.

Measures for controlling risk or minimising hazards in accordance with the hierarchy of control include:

- elimination
- substitution
- isolation
- engineering control
- administrative control
- personal protective equipment.

Signs and symbols include:

- emergency information signs (exits, equipment, first aid)
- fire signs (location of fire alarms and

RANGE STATEMENT

	<ul style="list-style-type: none">firefighting equipment)hazard identification, facility or location signsregulatory signs (e.g. prohibition, mandatory and limitation or restriction), such as hazard signs (danger and warning)safety tags and lockout (danger tags, out of service tags)site safety, directional, traffic and warning signs and symbols.
<i>Asbestos-containing materials are identified:</i>	<ul style="list-style-type: none">includes recognising common types of ACM that may be found in construction materials and buildingscovers asbestos rope/fabrics, asbestos cement sheeting, asbestos cement piping and lagging on pipes, bituminous waterproof membrane, fire doors, electrical switchboards, millboard, and sheeting under ceramic or vinyl floor tiles in wet areas.
Asbestos-containing materials are <i>reported</i> to:	<ul style="list-style-type: none">person in control of the workplace as set out in the relevant Asbestos Management Code.
<i>Personal protective equipment</i> is to include:	<ul style="list-style-type: none">apronsarm guardscapsdust mask/respiratorsear muffs/plugsgloveshard hatshigh visibility retro reflective vestsjacketsoverallssafety glasses/gogglessteel capped bootsUV protective clothing and sunscreen.
<i>Tools and equipment</i> include:	<ul style="list-style-type: none">firefighting equipmentfirst aid kitladders and work platformspersonal protective equipment.
<i>Materials</i> include:	<ul style="list-style-type: none">first aid materials suitable for emergency first aid treatment of minor injuries.
<i>Prohibited tools and equipment</i> that cannot be used near identified	<ul style="list-style-type: none">high-speed abrasive power and pneumatic tools, high pressure water cleaners, compressed

RANGE STATEMENT

ACM include:

air or abrasive blasting

- any vacuum cleaning equipment not specifically designed for safe work with asbestos.

Environmental requirements are to cover workplace quality management and include:

- clean-up protection
- stormwater protection
- waste management.

Types of fire includes:

- electrical, chemical, gas, mechanical, paper, wood or natural fire.

Fire equipment includes:

- breathing apparatus
- fire extinguishers
- fire hydrant and hoses
- fire reel
- fire truck
- manual firefighting instruments, such as fire blankets.

Emergency response and evacuation procedures include:

- emergencies, such as fire, toxic and/or flammable vapours emission, vehicle/mobile plant accident, structural collapse, chemical spill and injury to personnel
- extinguishing fires, organisational first aid requirements and evacuation.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCCSV5010A Interact with clients in a regulated environment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to initiate and undertake consultation with individuals and groups in regard to building surveying practices.

It includes the identification and implementation of appropriate interaction models according to community demographics, cultural considerations and social stratification; the analysis and evaluation of data to enable informed decision-making; and the presentation of findings to clients and other appropriate stakeholders.

Application of the Unit

Application of the unit This unit of competency supports the attainment of the understanding and skills to interact with clients in a regulated environment within the context of relevant legislation, the Building Code of Australia (BCA) and Australian standards.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Devise interaction strategies.	1.1. Interested and affected individuals and parties are identified. 1.2. Range of <i>interaction strategies</i> is identified, assessed for suitability and selected. 1.3. Resources required to conduct interaction are determined. 1.4. Regulations are reviewed to ensure strategies meet all criteria.
2. Assess demographic, cultural, social and psychological considerations.	2.1. Needs of disadvantaged individuals and groups are identified and incorporated from <i>relevant information and social theory</i> . 2.2. Cultural, social and psychological factors are considered and incorporated. 2.3. Urban, <i>demographic</i> , technological, political and economic effects are considered and incorporated. 2.4. Collective community behaviour is assessed.
3. Communicate legislative requirements to	3.1. Information is prepared that is clear, accurate and <i>appropriate to the needs of the parties involved</i> . 3.2. All parties involved are informed of the applicable

ELEMENT	PERFORMANCE CRITERIA
individuals and groups.	<p>legislation through <i>presentation of information</i>.</p> <p>3.3.Information is provided to affected parties at an appropriate time and place and in <i>an appropriate way</i>.</p> <p>3.4.Interaction is undertaken in an orderly manner to ensure all viewpoints are canvassed.</p>
4. Record, analyse and report results.	<p>4.1.Responses are assessed and checked against the project brief.</p> <p>4.2.Appropriate suggestions for improvement are incorporated into the project brief.</p> <p>4.3.Accurate report is prepared, including recommendations for approval.</p> <p>4.4.Overall effectiveness of the interaction is reviewed and evaluated, with action taken where required.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- ability to prepare information in alternative formats and to provide access to consultations for diverse groups through interpreters, etc.
- ability to respond to change and contribute to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems
- communication skills to:
 - consult with the community, including provision of information about legislation
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - read and interpret:
 - regulations
 - legislation
 - other relevant documentation
 - use and interpret non-verbal communication

REQUIRED SKILLS AND KNOWLEDGE

- use language and concepts appropriate to cultural differences
- written skills to:
 - record and report results of interaction with the community
 - prepare information
- innovation skills to identify and implement appropriate and diverse strategies for interacting with diverse communities
- organisational and time management skills to prepare information for meetings and to arrange and conduct meetings to timelines
- problem solving skills to review feedback and select appropriate suggestions for improvement for inclusion in report
- technological skills to:
 - complete documentation, including information materials and reports
 - enable information gathering and analysis.

Required knowledge

Required knowledge for this unit is:

- effects and psychological theories relevant to working with clients in a regulated environment, such as:
 - social stratification
 - social change
 - technological change
- local factors affecting communities and individuals
- relevant federal, state or territory legislation and local government policy and procedures
- research methods
- strategies for consultation
- urbanisation.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- comply with OHS regulations applicable to workplace operations
- apply organisational management policies and procedures, including quality assurance requirements where applicable
- perform a management role in the identification and implementation of at least one client negotiation and consultation process or equivalent
- provide reports to appropriate body/individual as determined by the project brief.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes

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where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated

EVIDENCE GUIDE

documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Interested and affected individuals and parties include:

- existing community groups
- government agencies
- individuals and special interest groups
- private sector businesses
- social groups and emergency services.

Interaction strategies include:

- client meetings
- home and site visits
- meetings of relevant stakeholders
- surveys.

Relevant information and social theory include:

- awareness of diverse cultures
- collective behaviour
- deviance
- economic order
- inequality
- political order social change and interaction
- stratification
- technology and the environment
- the family
- urbanisation.

Demographics include:

- age
- ethnicity
- gender
- individual and group profiles
- social stratification.

RANGE STATEMENT

- Appropriate to the needs of the parties involved* involves:
- providing material in alternative formats, such as:
 - large print
 - other languages.
- Presentation of information* includes:
- computer simulations
 - display plans
 - graphics
 - handouts
 - models
 - software presentations
 - videos.
- An appropriate way* includes:
- taking into account access issues, such as parking or building access and cultural requirements or protocols
 - using assistive technology, for example telecommunication device for the deaf (such as TTY) or video captioning
 - using interpreters, including sign language interpreters.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCCSV5011A Apply building codes and standards to residential buildings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to ensure that the building process complies with the Building Code of Australia (BCA) and relevant Australian standards.

The unit applies to residential buildings and includes the evaluation and interpretation of building requirements, classification of buildings according to the BCA criteria and strategies for compliance.

Application of the Unit

Application of the unit This unit of competency supports the attainment of the understanding and skills to apply building codes and standards to residential buildings within the context of relevant legislation, the BCA and Australian standards.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the purpose and basic intent of the BCA.	<p>1.1.Objectives of the BCA and the purpose of its respective components in relation to <i>construction in residential buildings</i> and <i>building categories</i> are evaluated and documented.</p> <p>1.2.Deemed-to-satisfy (DTS) concept for construction to meet BCA requirements is evaluated and documented.</p>
2. Locate and interpret code and standard requirements applicable to particular projects.	<p>2.1.Clauses from the BCA that apply to particular <i>residential building projects requiring review of compliance issues</i> are identified and documented.</p> <p>2.2.Prescriptive requirements of relevant BCA clauses and <i>standard specifications</i> are determined.</p> <p>2.3.Requirements of Australian standards referenced in the BCA are identified and documented.</p> <p>2.4.Special requirements that may be applicable to specific areas of <i>building surveying procedures</i> are identified and documented.</p>
3. Classify buildings.	<p>3.1.Nature of a building is determined in regard to its proposed use and site arrangement.</p> <p>3.2.BCA criteria are applied to determine the defined classification.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Apply solutions to construction problems for compliance with the BCA.	<p>3.3. BCA requirements are interpreted for multiple classifications.</p> <p>4.1. Criteria to ensure construction methods comply with the intent of the BCA are determined.</p> <p>4.2. Alternative approaches to construction problems that comply with the requirements of the BCA are reported.</p> <p>4.3. Assessment methods used to determine whether a building solution complies with performance requirements or DTS provisions of BCA are analysed and applied.</p> <p>4.4. Assessment methods are confirmed and identified as appropriate to meet the DTS provisions of BCA.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- ability to respond to change and contribute to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems
- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - read and interpret:
 - Australian standards
 - BCA
 - other relevant documentation
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
 - written skills to:
 - document building requirements
 - report alternative approaches to construction problem
- innovation skills to develop compliant alternative solutions to construction

REQUIRED SKILLS AND KNOWLEDGE

problems

- planning and organisational skills to collect, organise and analyse information
- technological skills to:
 - complete documentation and calculations
 - enable information gathering and analysis.

Required knowledge

Required knowledge for this unit is:

- authorities and powers of a building surveyor
- behaviour of structural members undergoing stress, strain, compression, bending or combined actions
- BCA and primary referenced Australian standards
- criteria for Class 1 and 10 buildings
- design, construction and structural principles of buildings
- DTS provisions
- processes for the administration and preparation of documentation
- processes for the interpretation of reports, working drawings and specifications
- relevant federal, state or territory legislation and local government policy and procedures
- research methods.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

EVIDENCE GUIDE

unit

- comply with OHS regulations applicable to workplace operations
- apply organisational management policies and procedures, including quality assurance requirements where appropriate
- classify construction in residential buildings through the evaluation and interpretation of compliance with the BCA and associated reporting of data, findings, recommendations and strategies for at least one residential building project or equivalent in compliance with relevant legislation
- provide reports to appropriate body/individual as determined by the project brief.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

EVIDENCE GUIDE

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Construction in residential buildings includes:

- compliance with relevant legislation
- design specifications
- evaluation, interpretation and adherence to legislative requirements for BCA Class 1 and 10 buildings
- maintenance specifications
- relevant Australian standards.

Building categories include:

- low-rise residential buildings
- single storey buildings.

Residential building projects requiring review of compliance issues include:

- calculation and processing of application or inspection fees
- project milestones
- provision of site access/facilities
- work schedules.

Standard specifications include:

- developed or detailed specifications addressing specific components, such as structural or other requirements
- industry standard specifications
- preliminary and outline specifications.

Building surveying procedures include:

- mechanical, structural, electrical and other services.

Unit Sector(s)

Unit sector

Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCCSV5012A Assess timber-framed designs for one and two storey buildings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to select structural members for a timber-framed domestic building up to and including two storeys.

It includes the evaluation of plans and specifications, and selection of structural members for ceiling and roof framing, timber wall frames, timber stumps, floor bearers and joists. It requires compliance with all relevant legislation, the Building Code of Australia (BCA) and Australian standards.

Application of the Unit

Application of the unit This unit of competency supports the attainment of the understanding and skills to assess timber-framed designs for one and two storey buildings, assess timber-framed designs, select structural members and identify and rectify faults within the context of relevant legislation, the BCA and Australian standards.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess plans and specifications for size, span and spacing of structural members required in ceiling and roof framing.	<p>1.1. Access is obtained to relevant plans, specifications and documentation related to <i>structural members required in ceiling and roof framing</i> for required <i>building categories</i>.</p> <p>1.2. Specified timber species and stress grading are identified.</p> <p>1.3. True length of common rafter and overhand and economical size of common rafter are determined to support specified roof structure and covering.</p> <p>1.4. Maximum span of common rafter is determined.</p> <p>1.5. Position, location and direction of struts and strutting beams to support roof and ceiling loads are determined and documented.</p> <p>1.6. Method of support at hip and valley rafters is determined and documented.</p> <p>1.7. Location, direction and span of ceiling joists and hanging beams to support specified roof design are determined and documented.</p> <p>1.8. Nominated member sizes, spans, spacings and locations are listed, documented and checked for accuracy against plans and specifications.</p>

ELEMENT	PERFORMANCE CRITERIA
2. Assess plans and specifications for permanent wind bracing requirements for nominated design gust wind speeds.	2.1. Access is obtained to relevant plans, specifications and documentation for <i>assessment of timber-framed designs</i> . 2.2. Location and category of building site is identified against design gust wind speed calculations. 2.3. Wind directions are selected and noted on plans. 2.4. Type and number of bracing units for each wind direction are selected. 2.5. Bracing details and description are documented, based upon calculations.
3. Assess plans and specifications for size, span and spacings of structural members for timber wall frames.	3.1. Access is obtained to relevant plans, specifications and documentation. 3.2. Specified timber species and stress grading are identified. 3.3. Roof load width for walls supporting ceiling and roof structures for a specified roof covering is determined. 3.4. Economical size for common wall studs is determined. 3.5. Size of top and bottom wall plates is determined according to load bearing conditions. 3.6. Size of studs at side window and door opening is determined. 3.7. Size of lintels to nominated openings is determined. 3.8. Size of timber posts and beams supporting overhands is determined. 3.9. Nominated member sizes, spans, spacings and locations are identified, listed, documented and checked against plans and specifications for accuracy.
4. Assess plans and specifications for size, span and spacing of structural members for timber stumps, floor bearers and joists.	4.1. Access is obtained to relevant plans, specifications and documentation. 4.2. Specified timber species and stress grading are identified. 4.3. Economical size for floor bearer and joist to suit maximum spans and spacings is determined. 4.4. Size of timber stumps and footing type and size required to support structural members are determined. 4.5. Size for timber trimmers, working and trimming joists for stair opening to suit maximum spans and

ELEMENT**PERFORMANCE CRITERIA**

spacings is determined.

4.6. Location, direction and span of bearers and joists to support specified structure are determined.

4.7. Nominated member sizes, spans, spacings, direction and bracings are identified, listed, documented and checked for accuracy against plans and specifications.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- ability to respond to change and contribute to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems
- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - read and interpret:
 - plans and specifications
 - other relevant documentation
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
 - written skills to record mathematical information
- numeracy skills to apply measurements and calculations
- planning and organisational skills to collect, organise and analyse information
- technological skills to:
 - complete documentation and calculations
 - enable information gathering and analysis.

Required knowledge

Required knowledge for this unit is:

- authorities and powers of a building surveyor
- behaviour of structural members undergoing stress, strain, compression, bending or

REQUIRED SKILLS AND KNOWLEDGE

combined actions

- grading processes and grade markings used to categorise timber and timber products
- manufactured timber framing systems
- nature of timber and effect of physiology and timber pests on its performance
- processes for the administration and preparation of documentation
- processes for the application of wind force, raking forces, and bracing and tie down systems
- processes for the interpretation of reports, working drawings and specifications
- relevant federal, state or territory legislation and local government policy and procedures
- research methods
- structural, design and construction principles of buildings, including the application of timber in buildings.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- comply with OHS regulations applicable to workplace operations
- apply organisational management policies and procedures, including quality assurance requirements where appropriate
- assess timber-framed designs, evaluate plans and specifications, and identify faults; select structural members for roofs, ceilings, walls,

EVIDENCE GUIDE

Context of and specific resources for assessment

floors and stumps relating to performance and the associated reporting of data, findings, recommendations and rectification strategies for at least one building project of up to two storeys or equivalent in compliance with relevant legislation

- provide reports to appropriate body/individual as determined by the project brief.

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to

EVIDENCE GUIDE

confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application

- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Guidance information for assessment

This unit could be assessed on its own or in combination with other units relevant to the job function, for example:

- CPCCSV5001A Assess the construction of domestic scale buildings
- CPCCSV5006A Assess construction faults in residential buildings.

EVIDENCE GUIDE

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Assessment processes and techniques should, as far as is practical, take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Structural members required in ceiling and roof framing:

- includes evaluation and identification of structural members used in:
 - ceiling and roof framing
 - floor bearer and joist installing
 - timber stumping
 - timber wall framing
- suitable for the building design in compliance with:
 - BCA
 - design specifications
 - legislative requirements
 - maintenance specifications
 - relevant legislation.

Building categories include:

- all timber-framed domestic scale buildings up to and including two storeys.

Assessment of timber-framed designs:

- includes the identification and recording and reporting of faults, in accordance with workplace providers, in verbal or written

RANGE STATEMENT

format

- timber-framed designs include:
 - floor framing, such as loose set single storey timber structures and two storey suspended upper floor level construction
 - overhang framing with soffits and eaves, attached carport, attached veranda and attached patio
 - roof framing, such as skillion, gable, hip and valley and cathedral
 - wall framing of various sizes, bracing locations and tie downs.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCCSV5015A Assess structural requirements for domestic scale buildings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to assess the structural requirements of domestic scale buildings and those of a similar loading, construction and size, such as small industrial, commercial or public buildings.

It includes the application of design concepts to the selection, positioning and sizing of all structural members and materials that form a building structure.

Application of the Unit

Application of the unit This unit of competency supports the attainment of the understanding and skills to assess structural requirements for domestic scale buildings within the context of relevant legislation, the Building Code of Australia (BCA) and Australian standards.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Identify structural requirements and loads commonly used in structural design.</p>	<p>1.1. <i>Structural requirements</i> relating to equilibrium, stability, strength, functionality, economy and aesthetics are determined in <i>adherence to legislative requirements</i>.</p> <p>1.2. Different types of loading and loading methods and the effect on structures are identified and documented in accordance with BCA, relevant Australian standards, suppliers' technical data and empirical methods.</p>
<p>2. Analyse the effects of force and moments on structural elements.</p>	<p>2.1. Force, moments and equilibrium of force and the effects on structures are identified and <i>analysis</i> is conducted and recorded.</p> <p>2.2. Equilibrium of forces for co-planar systems in consideration of stability is identified and compared for performance.</p>
<p>3. Analyse properties and behaviour of structural materials.</p>	<p>3.1. Effect of force on materials in tension, compression, stress, strain and elasticity is identified and recorded.</p> <p>3.2. Structural properties and performances are differentiated for common materials and recorded.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Identify section properties of structural elements and their effect on structural performance.	<p>4.1. Cross-sectional geometry and common structural shapes are identified.</p> <p>4.2. Section properties and the relationship between first and second area moments, section modulus and gyration and deflection of beams are identified and compared for performance.</p> <p>4.3. Section properties' values for I (moment of inertia), Z (section modulus) and R (radius) for common sections are determined using tables or standard formulas and compared for performance.</p>
5. Compare the performance and properties of spanning elements.	<p>5.1. Structural considerations of loaded spanning elements for bending moments, shear forces, deflection and torsion are determined and compared for performance.</p> <p>5.2. Bending behaviour and performance of loaded support beams of various types, shapes, spans and loads are determined and compared for performance.</p> <p>5.3. Effect that connections have upon the structural performance of beams is identified and compared for performance.</p> <p>5.4. Principles of slab behaviour in relation to spans and stress distribution are identified and compared for performance.</p>
6. Determine performance criteria for columns.	<p>6.1. Effect of slenderness ratio that changes in length, cross-sections, connections and materials will have on the strength of a column are determined and compared for performance.</p> <p>6.2. Eccentric and axial load effect on the strength of column section and materials are determined and compared for performance.</p>
7. Identify factors affecting design of connections between structural elements.	<p>7.1. Transmission of forces between structural elements are determined and compared for performance.</p> <p>7.2. Methods of distributing stresses in connections between structural elements are determined and compared for performance.</p>
8. Outline how loads of various types occur and impinge on a building structure.	<p>8.1. Differences between types of loading, including dead load, live load, wind load, earthquake load and other load, causing actions are determined and compared for performance.</p> <p>8.2. Dead and live loads using BCA and relevant Australian standards are determined.</p> <p>8.3. Indication of direction of wind pressures on the</p>

ELEMENT**PERFORMANCE CRITERIA**

various surfaces of buildings specified in BCA and relevant Australian standards are determined.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- ability to respond to change and contribute to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems
- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - read and interpret:
 - BCA
 - relevant Australian standards
 - other relevant documentation
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
 - written skills to report findings and provide reports
- numeracy skills to analyse and apply complex mathematical information
- planning and organisational skills to collect, organise and analyse information
- technological skills to:
 - complete documentation and calculations
 - enable information gathering and analysis.

Required knowledge

Required knowledge for this unit is:

- behaviour of structural members undergoing stress, strain, compression, bending or combined actions
- nature of materials and effect on performance
- processes for the interpretation of working drawings and specifications
- processes for the preparation of documentation

REQUIRED SKILLS AND KNOWLEDGE

- relevant federal, state or territory legislation and local government policy and procedures
- research methods
- structural and design principles for buildings.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- comply with OHS regulations applicable to workplace operations
- apply organisational management policies and procedures, including quality assurance requirements where applicable
- assess, identify and report on findings for the design, positioning and sizing of structural members of at least one domestic scale building project or equivalent
- provide reports to appropriate body/individual as determined by the project brief.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

EVIDENCE GUIDE

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace

EVIDENCE GUIDE

- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Assessment of ***structural requirements***:

- includes:
 - analysis of engineering drawings
 - evaluation of site physicality
 - identification of safe structural practices
- may require actual site visits.
- domestic scale buildings (similar in characteristics to those of residential dwellings)

Adherence to legislative

RANGE STATEMENT

requirements is limited to:

in terms of loading, construction and size and may include small industrial, commercial and public buildings).

Analysis includes:

- 'I' (moment of inertia) values
- base unit mass, density, velocity, acceleration, force and stress
- column changes in length, cross-sectional, restraints, material and eccentricity
- cross-sectional geometry and common structural shapes
- deflections for symmetrically loaded, simply supported timber beams of various shapes, spans and loads
- directions of wind pressure loads
- force on materials in tension, compression, stress, strain and elasticity
- forces associated with levers identified by direction and value
- forces for co-planar non-current force systems
- load differences, including:
 - dead load
 - live load
 - wind load
 - earthquake load
- minimum bracing requirements
- removal of trusses
- restraints for use with beams
- second area moments and deflection of beams
- simple roof truss transmission force
- structural properties differentiated for common materials
- symmetrically loaded simply supported situations for:
 - bending moments
 - deflection
 - shear forces
 - torsion
- tension and compression stresses of roof members
- wind forces and wind velocity for bracing.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCSUS4001A Implement and monitor environmentally sustainable work practices

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to effectively analyse, implement and monitor environmentally sustainable work practices and their effectiveness on a work site, including contributing to consumer environmental efficiency.

Application of the Unit

Application of the unit This unit of competency supports the needs of those with responsibility for a specific area or site of work, or those who lead a work group or team by using processes and techniques necessary to implement and monitor environmentally sustainable work practices, including the development of processes and tools.

The context of this competency applies to all sectors of the construction industry. It may be applied to all sections of an organisation, including a work site, designated work area, in transit and/or an office.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Investigate current practices in relation to resource usage.	<p>1.1.Environmental regulations applying to the organisation are identified.</p> <p>1.2.Procedures for ensuring <i>compliance</i> with environmental regulations are assessed.</p> <p>1.3.Information on <i>environmental and resource efficiency</i> systems and procedures are collected, and where appropriate, provided to <i>stakeholders, key personnel and specialists</i>.</p> <p>1.4.Current resource usage is measured and documented by members of the work group.</p> <p>1.5.Current <i>purchasing strategies</i> are analysed and documented.</p> <p>1.6.Current work processes and products are analysed to access information and data and to assist in identifying areas for improvement.</p>
2. Set targets for improvement.	<p>2.1.Input is sought from stakeholders, key personnel and specialists and shared with them as appropriate.</p> <p>2.2.External sources of information and data are accessed as required.</p> <p>2.3.Alternative solutions to work site environmental issues are evaluated.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Implement performance improvement strategies.	<p>2.4. Efficiency targets are set.</p> <p>3.1. Techniques and tools are sourced to assist in achieving targets.</p> <p>3.2. Continuous improvement strategies are applied to work site, including ideas and possible solutions to communicate to stakeholders, key personnel and specialists.</p> <p>3.3. Environmental and resource efficiency improvement plans for work site and clients are integrated with other operational activities and implemented.</p> <p>3.4. Suggestions and ideas about environmental and resource efficiency management are sought from stakeholders, key personnel and specialists and shared with them to act on as appropriate.</p> <p>3.5. Costing strategies are implemented to fully value environmental assets and are shared with stakeholders, key personnel and specialists as necessary.</p>
4. Monitor performance.	<p>4.1. Outcomes are documented and reports on targets are communicated to key personnel and stakeholders.</p> <p>4.2. Strategies are evaluated.</p> <p>4.3. New targets are set and new tools and strategies investigated and applied.</p> <p>4.4. Successful strategies are promoted and, where possible, participants rewarded.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- ability to source/identify the latest industry environmental sustainability concepts and technologies
- applying learning to future opportunities
- change management skills
- communication skills to:

REQUIRED SKILLS AND KNOWLEDGE

- answer questions
- clarify and acknowledge suggestions relating to work requirements and environmental efficiency with stakeholders
- enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
- read and interpret:
 - documentation
 - environmental and resource efficiency requirements
- support information flow between various internal and external stakeholders to resolve and report on environmental and resource efficiency issues
- use and interpret non-verbal communication
- use language and concepts appropriate to cultural differences
- creating tools to measure and monitor improvements and report on outcomes to stakeholders
- innovation skills to identify improvements, apply knowledge about resource use to organisational activities and customer service, and develop resource efficiency tools
- numeracy skills to analyse data on company and stakeholder resource consumption and waste product volumes
- problem solving skills to recognise and analyse problems, including:
 - devising approaches
 - implementing and reflecting on environmental and water, energy or resource efficiency management policies and procedures relevant to work site to improve environmental sustainability
 - share alternative approaches as required
- skills to relate to different genders and people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
- technology skills, including the ability to:
 - operate and shut down equipment
 - where relevant, use software systems for recording and filing documentation for measurement and improvement of resource usage and consumption.

Required knowledge

Required knowledge for this unit is:

- how tradespersons can contribute to environmental sustainability
- knowledge of compliance requirements for all relevant environmental and sustainability legislation, regulations and codes of practice including resource hazards and risks associated with work site:
 - supervision
 - job specifications
 - strategies and procedures to maximise opportunities and minimise impacts

REQUIRED SKILLS AND KNOWLEDGE

- relevant to stakeholders and personal area of responsibility
- relevant knowledge of environmental, resource and energy/water efficiency issues, systems and procedures specific to industry practice
- knowledge of best practice approaches and quality assurance systems relevant to area of responsibility and industry
- ability to identify and advise on water/energy efficiency opportunities for stakeholders and key personnel
- supply chain procedures
- OHS issues and requirements
- organisational structure and reporting channels and procedures
- terms and conditions of employment, including policies and procedures, such as:
 - daily tasks
 - equal opportunity
 - work area responsibilities
 - worker, supervisor and employer rights.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed by analysing and monitoring effective sustainable work practices on a construction project work site.

This unit of competency can be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- implement and monitor integrated environmental and resource efficiency management policies and procedures within a work site, including:

EVIDENCE GUIDE

- access, collect, analyse and organise information from a number of sources to provide information, advice and tools or resources for improvement opportunities to stakeholders and key personnel
- identify possible areas for improved practices and resource efficiency for stakeholders
- communicate benefits of changing practices to work team and customers
- implement new approaches and improvement plans, including planning and organising activities for staff and stakeholders in relation to:
 - measurement of current use
 - devising strategies to improve environmental and resource efficiency issues
 - reporting as required ensuring appropriate action is taken within work site in relation to environmental and sustainability compliance and potential hazards
- monitor and evaluate improvement plans and efficiency targets, using evaluation and monitoring tools and technology to potentially revise and adjust approaches and strategies to ensure continuous improvement.

Evidence that could be used, reflecting the requirements of the unit of competency and work being performed as evidence, include:

- reports of activities of work group in relation to:
 - measurement of resources and efficiency
 - development of improvement strategies
- work plans outlining approaches to improved practices, with documented benchmarks
- invoices from stakeholders specifying materials recommended for improved efficiency and those actually used
- quotes and tenders
- lists of environmental hazards, risks and inefficiencies, and opportunities for

EVIDENCE GUIDE

improvements identified in the work site

- work samples, tools, techniques or simulated activities and the outcomes.

Processes may include:

- relevant authenticated correspondence
- way in which advice is sought and suggestions made about improvements from stakeholders and key personnel
- evidence of implementation of programs, such as:
 - green building program
 - supply chain program for purchasing sustainable products
 - environmental site management framework or product recommendations
- notes on understanding external benchmarks and support for particular benchmarks to be used, with expected outcomes and including approaches to recommend products and practices to stakeholders for improving their resource use.

Resource implications for assessment must include:

- observation by the assessor over a period of time and in a range of situations and/or evidence provided to the assessor in written or verbal form, including:
 - implementing tools and techniques
 - review of work site and stakeholders/key personnel to assess and measure resource use, hazards and compliance
 - application of learning to future activities
 - recommended products and practices to stakeholders
- access to a range of information and resources for assessment as listed in the range statement, such as:
 - environmental and sustainability legislation
 - compliance documentation
 - organisational and procedural requirements or organisation plans
 - work supervision and work site documentation, including personnel and

EVIDENCE GUIDE

	responsibilities
	<ul style="list-style-type: none">quotes, tenders, invoices.
Context of and specific resources for assessment	<p>This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.</p> <p>Assessment of essential underpinning knowledge will usually be conducted in an off-site context.</p> <p>Assessment is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none">an induction procedure and requirementrealistic tasks or simulated tasks covering the mandatory task requirementsrelevant specifications and work instructionssupport materials appropriate to activityworkplace instructions relating to safe work practices and addressing hazards and emergenciesmaterial safety data sheetsresearch resources, including industry-related systems information. <p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p>
Method of assessment	<p>Assessment methods must:</p> <ul style="list-style-type: none">satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Packageinclude direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical applicationreinforce the integration of employability skills with workplace tasks and job rolesconfirm that competency is verified and able to be transferred to other circumstances and environments.

EVIDENCE GUIDE

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Compliance includes:

- meeting relevant Acts, laws, by-laws and regulations, codes of practice or best practice to support compliance in environmental performance and sustainability at each level as required (such as Environmental Protection,

RANGE STATEMENT

	<p>Biodiversity Conservation Act and Building Code of Australia)</p> <ul style="list-style-type: none"> • levels include: <ul style="list-style-type: none"> • federal • industry • international • local government • organisation • reporting breaches • state and territory.
<p><i>Environmental and resource efficiency</i> includes:</p>	<ul style="list-style-type: none"> • approaches of industry associations, such as: <ul style="list-style-type: none"> • Australian Building Greenhouse Rating • green plumbers • green purchasing • Housing Industry Association (HIA) GreenSmart • ISO 14001 Environmental Management Systems • lifecycle thinking • Master Builders Association of Victoria Green Living, Leadership in Energy and Environmental Design (LEED), or Green Building Council of Australia (GBCA) Green Star environmental rating system • National Australian Building Environmental Rating Scheme (NABERS) • product stewardship • supply chain management • Victoria Stormwater Management Guidelines of the Environment Protection Authority (EPA) • implementing and using alternative practices, procedures or materials to reduce or eliminate resource consumption on work site • recommendations to stakeholders, including: <ul style="list-style-type: none"> • addressing environmental and resource sustainability initiatives, such as an environmental framework, action plan, recommendations, surveys and audits with stakeholders and key personnel • efficient water use (e.g. rainwater tanks,

RANGE STATEMENT

grey water sprinkler systems or timers)

- energy use (e.g. equipment/appliances installed; equipment, appliance and tool maintenance; transporting materials; heating and cooling; and building efficiency)
- environmental site management
- evaluating and implementing most appropriate waste treatment, including waste to landfill, recycling, re-use, recoverable resources and wastewater treatment through site management
- improving resource, energy and water efficiency
- including environmental performance in tender and quote specifications
- initiating and maintaining appropriate work site procedures for operational energy consumption, including stationary and non-stationary (transport) energy
- preventing and minimising risks and maximising opportunities on work site and for stakeholders
- reducing emissions of greenhouse gases
- reducing material usage
- reducing stormwater pollution
- reducing use of non-renewable resources
- types of products and materials used
- reference to standards, guidelines, industry association standards, codes of practice and best practice approaches such as:
 - federal government standards, including five-star rating for all new homes.

Stakeholders, key personnel and specialists (individuals and groups) both within and external to the organisation who have direct or indirect interest in the organisation's conduct, actions, products and services, include:

- clients
- employees at all levels of the organisation
- government
- investors
- key personnel within the organisation
- local community
- specialists outside the organisation who may have particular technical expertise
- suppliers

RANGE STATEMENT

- Purchasing strategies*** include:
- other organisations.
 - influencing stakeholders to take up environmental sustainability approaches and products
 - researching and participating in programs, such as a supply chain program to purchase sustainable products (such as radial timber, sustainable timber, and low flow fittings and appliances).
- Techniques and tools*** include:
- accessing the skills of others as appropriate to the specific industry context
 - environmental site management plans
 - examination of invoices from suppliers
 - examination of relevant information and data
 - integration of environmental and sustainability specifications in quotes and tenders
 - measurements made under different conditions
 - recommendation of sustainable products and practices to stakeholders.
- Suggestions*** include:
- eliminating the use of hazardous and toxic materials
 - expressing green purchasing power through using and recommending a selection of suppliers with improved environmental performance (e.g. green power, lifecycle thinking, product stewardship, energy or water efficiency)
 - ideas that help to improve energy and water efficiency
 - making more efficient use of resources, materials, energy and water
 - maximising opportunities to use renewable, recyclable, reusable and recoverable resources (energy, water, materials, products and waste)
 - preventing and minimising risks and maximising opportunities, such as use of renewable energy such as solar or grey water, and other alternative forms of water, energy and resources
 - recommending and using alternative sustainable products, materials, procedures, practices and installation techniques
 - reducing emissions of greenhouse gases by

RANGE STATEMENT

- reducing waste and transport
- reducing the consumption of non-renewable resources, such as water, fuel, and materials
 - seeking alternative sources of water and energy or encouraging conservation.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPPSEC3007A Maintain security of environment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to maintain the safety and security of premises. It requires the ability to communicate effectively, maintain operational safety and respond appropriately to security risk situations.

This unit may form part of the licensing requirements for persons engaged in security operations in those states and territories where these are regulated activities.

Application of the Unit

Application of the unit This unit of competency has wide application in the security industry in those roles involving operational activities. Competency requires legal and operational knowledge applicable to relevant sectors of the security industry. The knowledge and skills described in this unit are to be applied within relevant legislative and organisational guidelines.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Maintain effective relations.	<p>1.1 Applicable provisions of <i>legislative</i> and <i>organisational requirements</i> relevant to <i>assignment instructions</i> are identified and complied with.</p> <p>1.2 Effective <i>interpersonal techniques</i> are used to develop, support and promote confidence with <i>relevant persons</i>.</p> <p>1.3 Communication is courteous, professional and sensitive to individual <i>social and cultural differences</i>.</p> <p>1.4 Personal presentation is maintained in accordance with organisational requirements.</p>
2 Maintain operational safety.	<p>2.1 <i>Environmental factors</i> are continually monitored, assessed and reviewed to identify distinctive features and any change in characteristics that might indicate unusual or suspicious behaviour.</p> <p>2.2 Personal safety checks are made on a systematic and routine basis in accordance with organisational procedures.</p> <p>2.3 Communication is maintained continually throughout security operations using appropriate <i>communication channels and processes</i>.</p> <p>2.4 <i>Resources and equipment</i> are maintained and used appropriate to the security operation.</p> <p>2.5 <i>Security risk situations</i> are accurately identified and assessed for degree of risk to self, others, property and premises.</p>
3 Respond to security risks.	<p>3.1 <i>Response</i> is formulated and carried out within scope of own role, competence and authority.</p> <p>3.2 Changing circumstances are monitored and responses are</p>

ELEMENT	PERFORMANCE CRITERIA
	adjusted as required to maintain security.
	3.3 Response initiative maximises the safety and security of self, others, property and premises.
	3.4 Requirements for specialist assistance or advice is identified and promptly sought in accordance with organisational procedures.
	3.5 Relevant <i>documentation</i> is completed and securely maintained with due regard to confidentiality in accordance with organisational procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge and their level required for this unit.

Required skills

- communicate effectively with people from different social, cultural and ethnic backgrounds and of varying physical and mental abilities
- communicate using appropriate channels and communication codes and signals
- determine response appropriate to security risk situation
- facilitate commonsense solutions within operating parameters
- identify and comply with applicable legal and procedural requirements including licensing requirements
- identify and comply with security incident response procedures
- identify security risk factors and conduct risk assessment
- minimise hazards and risks to the health and safety of self and others
- operate security and communications equipment
- present a professional image to members of the public and colleagues
- read, analyse and interpret information
- recognise support and assistance requirements
- record and report information
- select and use equipment appropriate to the security operation.

Required knowledge

- applicable legislative provisions relevant to 'use of force' guidelines and licensing requirements
- bomb threat and counter-terrorism procedures
- communication channels, codes and signals
- documentation procedures and processes

REQUIRED SKILLS AND KNOWLEDGE

- emergency and evacuation procedures and instructions
- first aid principles and procedures
- limits of own responsibility and authority
- methods of restraint and associated effects (eg, restraint related injury or death)
- observation and monitoring techniques
- operational principles of security, communication and protective equipment
- premises layout and access points
- principles of effective communication including interpersonal techniques
- reporting structure and processes
- structure and responsibilities of the emergency services agencies
- types of security situations which may be encountered during guarding operations and appropriate responses.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

- identifying and assessing all factors which might impact on the safety and security of persons and property
- formulating and implementing appropriate responses or contingency measures to maintain security
- systematically monitoring security activities and varying operational plans as required to meet changing circumstances
- maximising the safety and protection of people involved in incidents while carrying out response activities
- communicating effectively on a one-to-one and group basis with people from a range of diverse backgrounds and of varying abilities
- providing accurate and constructive operational observations and completing documentation in an appropriate style and format.

Context of and specific resources for assessment

Context of assessment includes:

- a setting in the workplace or environment that simulates the conditions of performance described in the elements,

performance criteria and range statement.

Resource implications for assessment include:

- access to a registered provider of assessment services
- access to a suitable venue and equipment
- access to plain English version of relevant statutes and procedures
- assessment instruments including personal planner and assessment record book
- work schedules, organisational policies and duty statements.

Reasonable adjustments must be made to assessment processes where required for people with disabilities. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment This unit of competency could be assessed using the following methods of assessment:

- observation of processes and procedures
- questioning of underpinning knowledge and skills.

Guidance information for assessment Assessment processes and techniques must be culturally appropriate and suitable to the language, literacy and numeracy capacity of the candidate and the competency being assessed. In all cases where practical assessment is used, it should be combined with targeted questioning to assess the underpinning knowledge.

Oral questioning or written assessment may be used to assess underpinning knowledge. In assessment situations where the candidate is offered a choice between oral questioning and written assessment, questions are to be identical.

Supplementary evidence may be obtained from relevant authenticated correspondence from existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

regional contexts) may also be included.

Legislative requirements may relate to:

- apprehension and powers of arrest
- Australian standards and quality assurance requirements
- counter-terrorism
- crowd control and control of persons under the influence of intoxicating substances
- force continuum, use of force guidelines
- general 'duty of care' responsibilities
- inspection of people and property, and search and seizure of goods
- licensing or certification requirements
- privacy and confidentiality
- relevant commonwealth, state and territory legislation, codes and national standards for:
 - anti-discrimination
 - cultural and ethnic diversity
 - environmental issues
 - equal employment opportunity
 - industrial relations
 - Occupational Health and Safety (OHS)
- relevant industry codes of practice
- telecommunications
- trespass and the removal of persons
- use of restraints and weapons:
 - batons
 - firearms
 - handcuffs
 - spray.

Organisational requirements may relate to:

- access and equity policies, principles and practices
- business and performance plans
- client service standards
- code of conduct, code of ethics
- communication and reporting procedures
- complaint and dispute resolution procedures
- emergency and evacuation procedures
- employer and employee rights and responsibilities
- OHS policies, procedures and programs
- own role, responsibility and authority
- personal and professional development
- privacy and confidentiality of information
- quality assurance and continuous improvement processes

Assignment instructions may include:

- and standards
- resource parameters and procedures
- roles, functions and responsibilities of security personnel
- storage and disposal of information.
- assignment purpose and objective
- assignment tasks and procedures
- assignment timeframe
- client identification information
- incident and security risk response procedures
- monitoring objectives
- personal presentation requirements
- personal protection equipment
- premises location and layout
- reporting and documentation requirements
- resource and equipment requirements.

Interpersonal techniques may involve:

- active listening
- being non-judgemental
- being respectful and non-discriminatory
- constructive feedback
- control of tone of voice and body language
- culturally aware and sensitive use of language and concepts
- demonstrating flexibility and willingness to negotiate
- effective verbal and non-verbal communication
- maintaining professionalism
- providing sufficient time for questions and responses
- reflection and summarising
- two-way interaction
- use of plain English
- use of positive, confident and cooperative language.

Relevant persons may include:

- clients
- colleagues
- emergency services personnel
- members of the public
- supervisor.

Social and cultural differences may relate to:

- dress and personal presentation
- food
- language
- religion
- social conventions
- traditional practices
- values and beliefs.

- Environmental factors*** may relate to:
- access to assistance and resources
 - availability of exits and opportunities for escape
 - crowds
 - different degrees of light including low light and darkness
 - presence of several sources of threat
 - time of day
 - weather.
- Communication channels and processes may relate to:***
- direct line supervision paths
 - established communication protocols
 - formal communication pathways
 - lateral supervision paths
 - organisational communication networks
 - verbal and non-verbal communication procedures eg pro-words, phonetic alphabet, call signs, coded messages, use of abbreviations, hand signals.
- Resources and equipment may include:***
- access to emergency services and specialist personnel
 - back-up personnel
 - business equipment eg computers and computer applications
 - communication equipment eg two-way radio, pager, mobile telephone
 - defensive equipment eg batons, firearm, and the relevant licenses, permits and storage facilities
 - fire fighting equipment
 - first aid kit
 - personal protection equipment
 - security equipment eg electronic screening equipment, video cameras and monitors, alarms and signals.
- Security risks*** may relate to:
- breaches of law eg criminal damage, offences against people, public order, misuse of drugs and alcohol
 - emergencies eg fire, scenes of crime, accidents
 - hazards eg physical, chemical, electrical, psychological, biological
 - threats eg bombs, sabotage, assassination.
- Response may involve:***
- checking identification
 - defusing the situation
 - evacuating the premises
 - isolating area of potential risk
 - isolating risk
 - issuing verbal warnings
 - notifying relevant emergency services agencies
 - offering assistance

- provision of first aid
- request for support and assistance
- restraint of person
- tactical withdrawal
- use of basic defensive techniques
- use of negotiation techniques.
- activity logs
- incident reports
- records of conversation
- request for assistance forms
- running sheets
- vehicle and personnel movements
- written and electronic reports.

Documentation may include:

Unit Sector(s)

Unit sector Security

Competency field

Competency field Operations

CUVDES405A Research and apply techniques in spatial design

Modification History

Version	Comments
CUVDES405A	This version first released with <i>CUV11 Visual Arts, Craft and Design Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to research and apply techniques for application to spatial design. It involves interpreting work briefs, organising resources, testing ideas, and refining approaches to a range of design challenges. The unit covers the design process to the point of producing models or maquettes for spatial designs.

Application of the Unit

Individuals who generate ideas and solutions for the layout of spaces apply the skills and knowledge in this unit. Spatial design solutions are required for exhibitions, fit-outs for exterior spaces or environments, fit-outs for building foyers and offices, special events and theatre sets.

Skills associated with producing final designs can be found in units related to specific disciplines, such as set and exhibition design which are contained in Training Packages, such as CUE03 Entertainment and CUL04 Museum and Library/Information Services.

At this level, research, experimentation and ongoing refinement are used to produce a range of design work where individuals are beginning the process of finding their individual style. Work is undertaken independently with supervision and guidance as required.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Interpret spatial design briefs	1.1 Interpret the <i>specifications</i> of design <i>briefs</i> 1.2 Take user or client requirements into account when making decisions about <i>spatial design work</i> 1.3 Clarify issues about specifications, <i>parameters and constraints</i> with relevant people as required 1.4 Source and evaluate information pertinent to briefs
2. Organise resources for spatial design	2.1 Identify resources required to develop spatial design models, including <i>work space, tools and equipment</i> 2.2 Prepare and care for resources according to requirements 2.3 Follow storage and inventory procedures
3. Test spatial design approaches	3.1 Produce <i>preliminary visual representations</i> 3.2 <i>Identify possible approaches</i> and establish <i>criteria</i> for selecting final approach 3.3 Select appropriate <i>materials</i> , tools and equipment and <i>test approaches and techniques</i> 3.4 Evaluate testing processes against criteria and select the approach that best meets the requirements of briefs 3.5 Critique own work and seek feedback as required 3.6 <i>Refine</i> and <i>document the approach</i> to spatial design work

	based on testing and evaluation
4. Fabricate spatial design models or maquettes	<p>4.1 Evaluate the need for fabrication and the scope of work required</p> <p>4.2 Select and organise materials, tools and equipment for fabrication according to design approach</p> <p>4.3 Safely make models or maquettes ensuring consistency with design concepts and briefs</p> <p>4.4 Respond positively to feedback and refine work as required</p> <p>4.5 Present models or maquettes within agreed timeframes</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to engage with others about approaches to spatial design
- initiative and enterprise skills to experiment with techniques to produce effects that enhance the design of spaces
- learning skills to refine and improve a range of spatial design techniques
- literacy skills to interpret design briefs and research information about spatial design
- numeracy skills to calculate proportions, measurements and costs
- self-management and planning skills to plan work tasks
- technical skills to evaluate, adapt and integrate a range of techniques into the design and fabrication of models and maquettes.

Required knowledge

- role of experimentation in designing spaces
- formal elements and principles of design and their application to spatial design
- techniques, materials, tools and equipment and their application to different areas of spatial design
- common formats and features of spatial design briefs
- work and ideas of other designers specialising in spatial design
- history and theory of design in relation to spatial design
- intellectual property issues and legislation and their relevance to spatial design
- sustainability considerations for spatial design
- OHS requirements relevant to the design of spaces.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> test and use a range of approaches and techniques for the design of spaces in response to a brief produce a model or maquette for at least one spatial design apply knowledge of the processes and techniques used for spatial design in different contexts.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> briefs on which to base the design of spaces equipment and tools used to produce models or maquettes of spatial designs.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct observation of design or model making work in progress, including exploration of, and experimentation with, techniques evaluation of visual documentation of spatial designs evaluation of plans and models produced by the candidate questioning and discussion about the candidate's intentions and the work outcome review of portfolios of evidence review of third-party reports from experienced practitioners. <p>Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties, such as speakers of languages other than English, remote communities and those with interrupted schooling).</p>
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> BSBDES401A Generate design solutions BSBDES402A Interpret and respond to a design brief.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Specifications may refer to:</p>	<ul style="list-style-type: none"> • client needs • dimensions • purpose • style.
<p>Briefs are usually prepared by a commissioning body or organisation and may be:</p>	<ul style="list-style-type: none"> • diagrammatic • verbal • visual • written.
<p>Spatial design work may include:</p>	<ul style="list-style-type: none"> • exhibition design • fit-outs for exterior spaces or environments • foyer design • installation for specific event • office fit-outs • set design.
<p>Parameters and constraints may refer to:</p>	<ul style="list-style-type: none"> • considerations, such as: <ul style="list-style-type: none"> • client’s organisational background • contractual • copyright • ethical • health and safety • legal • subject matter • cost • material characteristics • technology • timeframe.
<p>Relevant people may include:</p>	<ul style="list-style-type: none"> • clients • colleagues • industry practitioners • managers • mentors • supervisors.

<p>Work space needs may include:</p>	<ul style="list-style-type: none"> • drafting table • electronic equipment • lighting and power requirements • process-specific space needs.
<p>Tools and equipment may include:</p>	<ul style="list-style-type: none"> • brushes • camera • computer • hand tools • ladders • lighting equipment • power tools • printer • relevant software • scanner.
<p>Preliminary visual representations may include:</p>	<ul style="list-style-type: none"> • computer-aided design and drafting (CADD) • colour boards • photography and digital imaging • plan drawing • sample boards • sketching.
<p>Identifying possible approaches includes:</p>	<ul style="list-style-type: none"> • identifying possible design solutions • identifying possible realisation options, such as by: <ul style="list-style-type: none"> • fabricating an aspect of the design • means of a model or maquette.
<p>Approaches may encompass:</p>	<ul style="list-style-type: none"> • aesthetic considerations • choice of fabrication options • design solutions • parameters of the brief.
<p>Criteria may include:</p>	<ul style="list-style-type: none"> • access to materials, tools and equipment required to realise designs • consistency with spatial design briefs • ease of manufacture • personal affinity with medium and materials.
<p>Materials may include:</p>	<ul style="list-style-type: none"> • cardboards • clays • fibres • glass • manufactured materials: <ul style="list-style-type: none"> • tiles • panels • carpeting

	<ul style="list-style-type: none"> • textiles • metals • modelling pastes • natural elements: <ul style="list-style-type: none"> • water • light • wind • plants • glazes • paints • paper • plastics • stains • wood and/or wood products.
Strategies to <i>test</i> techniques may involve:	<ul style="list-style-type: none"> • exploring techniques by making practice pieces, test pieces, mock-ups or samples • testing materials by applying stress and colour tests.
<i>Techniques</i> would depend on design solutions and realisation options and may include:	<ul style="list-style-type: none"> • carpentry • digital work • glasswork • lighting • modelling • painting and decoration • photography • projection • surface decoration • textile work.
Process followed to <i>refine</i> the design approach may involve:	<ul style="list-style-type: none"> • adjustment to design solution • adjustment to take account of elements and principles of design • adjustment to use the extended capabilities of techniques.
Process used to <i>document the approach</i> may involve:	<ul style="list-style-type: none"> • elevations • final drawings • illustrations • models • photographs • plans • specifications for fabrication.

Unit Sector(s)

Design – design process

HLTFA301C Apply first aid

Modification History

Not Applicable

Unit Descriptor

Descriptor

This unit of competency describes the skills and knowledge required to provide first aid response, life support, management of casualty(s), the incident and other first aiders, until the arrival of medical or other assistance

Application of the Unit

Application

These skills and knowledge may be applied in a range of situations, including community and workplace settings

Training Package users should ensure implementation is consistent with any specific workplace and/or relevant legislative requirements in relation to first aid, including State/Territory requirements for currency

Application of these skills and knowledge should be contextualised as required to address specific industry, enterprise or workplace requirements and to address specific risks and hazards and associated injuries

A current Senior First Aid, Workplace Level 2 or Level 2 qualification may provide evidence of skills and knowledge required by this competency unit. However, as with all evidence of competence, evidence must be assessed against the requirements specified in the competency unit

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Assess the situation

1.1 Identify assess and minimise *hazards* in the situation that may pose a risk of injury or illness to self and others

1.2 Minimise immediate *risk* to self and casualty's health and safety by controlling any hazard in accordance with occupational health and safety requirements

1.3 Assess casualty and identify injuries, illnesses and conditions

2. Apply first aid procedures

2.1 Calmly provide information to reassure casualty, adopting a communication style to match the casualty's level of consciousness

2.2 Use available *resources and equipment* to make the casualty as comfortable as possible

ELEMENT**PERFORMANCE CRITERIA**

- 2.3 Respond to the casualty in a culturally aware, sensitive and respectful manner
- 2.4 Determine and explain the nature of casualty's injury/condition and relevant first aid procedures to provide comfort
- 2.5 Seek consent from casualty prior to applying first aid management
- 2.6 Provide *first aid management* in accordance with *established first aid principles* and Australian Resuscitation Council (ARC) Guidelines and/or State/Territory regulations, legislation and policies and industry requirements
- 2.7 Seek first aid assistance from others in a timely manner and as appropriate
- 2.8 Correctly operate first aid equipment as required for first aid management according to manufacturer/supplier's instructions and local policies and/or procedures
- 2.9 Use safe manual handling techniques as required
- 2.10 Monitor *casualty's condition* and respond in accordance with effective first aid principles and procedures
- 2.11 Finalise casualty management according to casualty's needs and first aid principles
3. Communicate details of the incident
- 3.1 Request ambulance support and/or appropriate medical assistance according to relevant circumstances using relevant *communication media and equipment*
- 3.2 Accurately convey assessment of casualty's condition and management activities to ambulance services /other emergency services/relieving personnel
- 3.3 Prepare reports as appropriate in a timely manner, presenting all relevant facts according to established procedures
- 3.4 Accurately record details of casualty's physical condition, changes in conditions, management and response to management in line with established procedures
- 3.5 Maintain confidentiality of records and

ELEMENT**PERFORMANCE CRITERIA**

information in line with privacy principles and statutory and/or organisation policies

4. Evaluate own performance

4.1 Seek feedback from *appropriate clinical expert*

4.2 Recognise the possible psychological impacts on rescuers of involvement in critical incidents

4.3 Participate in debriefing/evaluation as appropriate to improve future response and address individual needs

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- ARC Guidelines relating to provision of first aid as outlined
- Awareness of stress management techniques and available support
- First aid management of:
 - abdominal injuries
 - allergic reactions
 - altered and loss of consciousness
 - bleeding
 - burns - thermal, chemical, friction, electrical
 - cardiac arrest
 - casualty with no signs of life
 - chest pain
 - choking/airway obstruction
 - injuries: cold and crush injuries; eye and ear injuries; head, neck and spinal injuries;

REQUIRED SKILLS AND KNOWLEDGE

- minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations
- envenomation - snake, spider, insect and marine bites
- environmental impact such as hypothermia, hyperthermia, dehydration, heat stroke
- fractures
- medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions
- near drowning
- poisoning and toxic substances (including chemical contamination)
- respiratory distress
- seizures
- shock
- stroke
- substance misuse - common drugs and alcohol, including illicit drugs
- Social/legal issues:
 - duty of care
 - need to be culturally aware, sensitive and respectful
 - importance of debriefing
 - confidentiality
 - own skills and limitations
- Understanding of the use of an Automated External Defibrillator (AED), including when to use and when not to

continued ...

Essential knowledge (contd):

- Working knowledge of:
 - basic occupational health and safety requirements in the provision of first aid
 - basic principles and concepts underlying the practice of first aid
 - chain of survival
 - first aiders' skills and limitations
 - infection control principles and procedures, including use of standard precautions
 - priorities of management in first aid when dealing with life threatening conditions
 - procedures for dealing with major and minor injury and illness

Essential skills:

It is critical that the candidate demonstrate the ability to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

REQUIRED SKILLS AND KNOWLEDGE

This includes the ability to:

- Administer medication in line with state/territory regulations, legislation and policies
- Apply first aid principles
- Call an ambulance and/or medical assistance according to relevant circumstances and report casualty's condition
- Communicate effectively and assertively in an incident
- Conduct an initial casualty assessment
- Demonstrate correct procedures for performing CPR using a manikin, including standard precautions (i.e. as per unit *HLTCPR201A Perform CPR*)
- Demonstrate:
 - ability to call an ambulance
 - consideration of the welfare of the casualty
 - safe manual handling
 - site management to prevent further injury
- Evaluate own response and identify appropriate improvements where required
- Follow OH&S guidelines
- Infection control, including use of standard precautions
- Make prompt and appropriate decisions relating to managing an incident in the workplace
- Plan an appropriate first aid response in line with established first aid principles, policies and procedures, ARC Guidelines and/or State/Territory regulations, legislation and policies and industry requirements and respond appropriately to contingencies in line with own skills
- Prepare a written incident report or provide information to enable preparation of an incident report
- Provide assistance with self-medication as per subject's own medication regime and in line with State/Territory legislation, regulations and policies and any available medical/pharmaceutical instructions
- Use literacy and numeracy skills as required to read, interpret and apply guidelines and protocols

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package. The evidence guide supplements assessment requirements that apply to all units in this Training Package. Users of this

EVIDENCE GUIDE

evidence guide should first read the package's assessment guidelines.

Critical aspects of assessment:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Competence should be demonstrated working individually and, where appropriate, as part of a first aid team
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace or community setting
- Currency of first aid knowledge and skills is to be demonstrated in line with State/Territory regulations, legislation and policies, ARC and industry guidelines

Context and resources required for assessment:

- Skills in performing first aid procedures are to be assessed through demonstration, with questioning to confirm essential knowledge
- For assessment purposes, demonstration of skills in CPR procedures requires using a model of the human body (resuscitation manikin) in line with Australian Resuscitation Council Guidelines

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

Related units:

This unit incorporates the content of units:

- HLTCPR201B Perform CPR
- HLTFA201B Provide basic emergency life support

EVIDENCE GUIDE

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Contextualisation to address specific requirements may include:

- Focus on first aid management of specific types of injury
- First aid provision under specific constraints or circumstances (e.g. in confined spaces, in maritime work environment or in work environment involving identified risks/hazards)

Established first aid principles include:

- Preserve life
- Prevent illness, injury and condition(s) becoming worse
- Promote recovery
- Protect the unconscious casualty

Vital signs include:

- Consciousness
- Breathing
- Circulation

A hazard is:

- A source or situation with the potential for harm in terms of human injury or ill-health, damage to property, the environment, or a combination of these

RANGE STATEMENT

Hazards may include:

- Physical hazards
- Biological hazards
- Chemical hazards
- Hazards associated with manual handling

Risks may include:

- Risks from equipment, machinery and substances
- Risks from first aid equipment
- Environmental risks
- Exposure to blood and other body substances
- Risk of further injury to the casualty
- Risks associated with the proximity of other workers and bystanders
- Risks from vehicles

Casualty's condition is managed for:

- Abdominal injuries
- Airway obstruction
- Allergic reactions
- Altered and loss of consciousness
- Bleeding
- Burns - thermal, chemical, friction, electrical
- Chest pain/cardiac arrest
- Injuries: cold and crush injuries; eye and ear injuries; head, neck and spinal injuries; minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations
- Near drowning
- Envenomation - snake, spider, insect and marine bites
- Environmental conditions such as hypothermia, hyperthermia, dehydration, heat stroke
- Fractures
- Medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions
- No signs of life
- Poisoning and toxic substances (including chemical contamination)
- Respiratory distress/arrest
- Seizures
- Shock
- Stroke

RANGE STATEMENT

- Substance misuse - common drugs and alcohol, including illicit drugs.
- First aid management must take into account applicable aspects of:*
- The setting in which first aid is provided, including:
 - workplace policies and procedures
 - industry/site specific regulations, codes etc.
 - OHS requirements
 - state and territory workplace health and safety legislative requirements
 - location and nature of the incident
 - situational risks associated with, for example, electrical and biological hazards, weather, motor vehicle accidents
 - location of emergency services personnel.
 - The use and availability of first aid equipment and resources
 - Infection control
 - Legal and social responsibilities of first aider
- Resources and equipment are used appropriate to the risk to be met and may include:*
- AED
 - First aid kit
 - Auto-injector
 - Puffer/inhaler
 - Resuscitation mask or barrier
 - Spacer device
- Communication media and equipment may include but are not limited to:*
- Telephones, including landline, mobile and satellite phones
 - HF/VHF radio
 - Flags
 - Flares
 - Two way radio
 - Email
 - Electronic equipment
 - Hand signals
- Appropriate clinical expert may*
- Supervisor/manager
 - Ambulance officer/paramedic

RANGE STATEMENT

include:

- Other medical/health worker

Documentation may include:

- Injury report forms
- Workplace documents as per organisation requirements

Documentation may include recording:

- Time
- Location
- Description of injury
- First aid management
- Fluid intake/output, including fluid loss via:
 - blood
 - vomit
 - faeces
 - urine
- Administration of medication including:
 - time
 - date
 - person administering
 - dose
- Vital signs

Unit Sector(s)

Not Applicable

HLTFA302C Provide first aid in remote situation

Modification History

HLT07 Version 4	HLT07 Version 5	Comments
HLTFA302B Provide first aid in remote situation	HLTFA302C Provide first aid in remote situation	ISC upgrade changes to remove references to old OHS legislation and replace with references to new WHS legislation. Updated unit codes to First Aid references.

Unit Descriptor

Descriptor

This unit of competency describes the skills and knowledge required to provide first aid to a casualty in a remote and/or isolated situation

Application of the Unit

Application

This unit is appropriate for those undertaking first aid work in remote or isolated workplace situations

Application of these skills and knowledge should be contextualised as required to address specific industry, enterprise or workplace requirements and to address specific risks and hazards and associated injuries

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare to respond to emergency in a remote situation

1.1 *Prepare for isolated travel* or work, accounting for expected contingencies

1.2 Assess casualty's condition and determine appropriate response in order to minimise hazards and determine need for medical assistance

1.3 Evaluate options for transporting casualty or waiting for medical assistance in relation to environmental issues, transport availability and casualty's condition

2. Provide first aid in a remote situation

2.1 Determine and explain the nature of casualty's injury/condition and relevant first aid procedures to provide comfort

2.2 Seek consent from casualty prior to applying first aid management

2.3 Provide first aid response to address casualty's condition and in accordance with effective first aid principles

2.4 Respond to the casualty in a culturally aware, sensitive and respectful manner

2.5 Monitor casualty's condition and undertake ongoing first aid procedures as required

ELEMENT**PERFORMANCE CRITERIA**

- 2.6 Calmly provide information to reassure casualty during the wait for medical assistance, adopting a communication style to match the casualty's level of consciousness
- 2.7 Provide shelter from elements in accordance with environmental conditions
- 2.8 Document condition of casualty over time to assist in on-going management
3. Work in conjunction with medical and emergency services support
- 3.1 Establish communication links to medical services, using relevant communication equipment to ensure prompt control action is undertaken
- 3.2 Request ambulance support or appropriate medical assistance according to relevant circumstances
- 3.3 Administer medication under direct instruction from an *authorised health worker* as required
- 3.4 Assist in the evacuation of the casualty by following directions given by emergency services as required
4. Evaluate the incident
- 4.1 Evaluate management of the incident and where required develop an action plan in consultation with relevant parties
- 4.2 Participate in debriefing/evaluation in order to improve future operations and address individual's needs
- 4.3 Formulate and review contingency planning to identify and select improved or alternative management principles and procedures as required

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Awareness of stress management techniques and available support
- Infection control principles and procedures, including use of standard precautions
- Principles for evaluating management options relating to transporting casualty and/or waiting for assistance
- Principles of identifying and preparing area for safe evacuation (including aero-medical evacuation)
- Principles of preparing for providing first aid in an area remote from ready assistance, including identifying and preparing supplies to address contingencies specific to different types of situation
- Understanding of WHS principles
- Working knowledge of communication systems, equipment and methods as available in the remote situation

Essential skills:

It is critical that the candidate demonstrate the ability to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Accurately listen to, clarify and apply medical instructions
- Administer medication under direct instruction from an authorised health worker and in accordance with State/Territory regulations, legislation and policies
- Communicate effectively and assertively and show leadership in an incident
- Conduct an initial casualty assessment in a remote situation
- Demonstrate:
 - adequate infection control procedures, including standard precautions
 - identification and preparation of area for safe evacuation (including aero-medical evacuation)
 - safe manual handling
- Evaluate available options for transporting or maintaining condition of casualty
- Improvise treatment and associated resources
- Interpret and use listed documents
- Make prompt and appropriate decisions relating to managing an incident in a remote

REQUIRED SKILLS AND KNOWLEDGE

situation

- Plan an appropriate first aid response in line with established first aid principles, policies and procedures, ARC Guidelines and/or state/territory regulations, legislation and policies and industry requirements and respond appropriately to contingencies in line with own level of skills and knowledge
- Prepare a written incident report or provide information to enable preparation of an incident report
- Transport casualty safely using available methods
- Undertake contingency planning in relation to providing a first aid response in a remote situation
- Use available communication methods and equipment to access medical assistance
- Use available resources effectively to manage pain
- Use literacy and numeracy skills as required to read, interpret and apply guidelines and protocols

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects of assessment:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Competence should be demonstrated working individually and, where appropriate, as part of a first aid team
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace or community setting
- Currency of first aid knowledge and skills is to be demonstrated in line with State/Territory regulations, legislation and policies, Australian Resuscitation Council and industry guidelines
- Assessment should utilise aspects of actual or simulated remote situation relevant to work or community context

Method of assessment may

- Skills in performing first aid procedures are to be

EVIDENCE GUIDE

include:

assessed through demonstration, with questioning to confirm essential knowledge

- Skills may be assessed through simulations, using anatomical models, manikins or in a high fidelity simulation centre

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

Related unit:

This unit should be assessed either after or in conjunction with achievement of the following related competency unit:

- HLTFA311A Apply first aid

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Contextualisation to address

- Focus on first aid management of specific types of

RANGE STATEMENT

specific requirements may include:

injury

- First aid provision under specific constraints or circumstances (e.g. in confined spaces, in maritime work environment or in work environment involving identified risks/hazards)

Preparation for isolated/remote travel may include:

- Selection of relevant communication equipment
- Accessing relevant first aid supplies and resources to cater for environmental conditions
- Considering access/egress opportunities
- Notifying relevant authorities of travel plans

In remote/isolated situations consideration to travel or wait would depend upon:

- Severity of injury
- Time required for medical assistance to arrive
- Whether movement might hinder rescue
- Advice given by authorised health worker
- Whether contact with medical and/or emergency services has been achieved

Documentation, especially in remote/isolated situations may include recording:

- Time
- Location
- Description of injury
- First aid management
- Fluid/oral intake/output, including fluid loss via:
 - blood
 - vomit
 - faeces
 - urine
- Administration of medication including time, date, person administering, dose
- Vital signs

Authorised health worker may include:

- Paramedic/ambulance officer
- General practitioner
- Nurse practitioner

Unit Sector(s)

Not Applicable

HLTFA311A Apply first aid

Modification History

HLT07 Version 4	HLT07 Version 5	Comments
HLTFA301C Apply first aid	HLTFA311A Apply first aid	Updated in V5 - changes to competency outcomes of first aid units

Unit Descriptor

Descriptor

This unit of competency describes the skills and knowledge required to provide first aid response, life support, management of casualty(s), the incident and other first aiders, until the arrival of medical or other assistance

Application of the Unit

Application

These skills and knowledge may be applied in a range of situations, including community and workplace settings

Training Package users should ensure implementation is consistent with any specific workplace and/or relevant legislative requirements in relation to first aid, including State/Territory requirements for currency

Application of these skills and knowledge should be contextualised as required to address specific industry, enterprise or workplace requirements and to address specific risks and hazards and associated injuries

A current Senior First Aid, Workplace Level 2 or Level 2 qualification may provide evidence of skills and knowledge required by this competency unit. However, as with all evidence of competence, evidence must be assessed against the requirements

specified in the unit of competency

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

1. Assess the situation

PERFORMANCE CRITERIA

1.1 Identify assess and minimise *hazards* in the situation that may pose a risk of injury or illness to self and others

1.2 Minimise immediate *risk* to self and casualty's health and safety by controlling any hazard in accordance with work health and safety requirements

1.3 Assess casualty and identify injuries, illnesses and conditions

ELEMENT**PERFORMANCE CRITERIA**

2. Apply first aid procedures

- 2.1 Adopt a communication style to match the casualty's level of consciousness
- 2.2 Use available *resources and equipment* to make the casualty as comfortable as possible
- 2.3 Respond to the casualty in a culturally aware, sensitive and respectful manner
- 2.4 Determine and explain relevant first aid procedures to provide comfort
- 2.5 Seek consent from casualty prior to applying first aid management
- 2.6 Provide *first aid management* in accordance with *established first aid principles and procedures*
- 2.7 Seek first aid assistance from others in a timely manner and as appropriate
- 2.8 Correctly operate first aid equipment for first aid management according to manufacturer/supplier's instructions and procedures
- 2.9 Use safe manual handling techniques
- 2.10 Monitor *casualty's condition* and respond in accordance with established first aid principles and procedures
- 2.11 Finalise casualty management according to casualty's needs and first aid principles

3. Communicate details of the incident

- 3.1 Request ambulance support and/or appropriate medical assistance according to relevant circumstance
- 3.2 Accurately convey observation of casualty's condition and management activities to ambulance services / relieving personnel
- 3.3 Accurately assess and *report details* of casualty's physical condition, changes in conditions, management and response to management in line with established procedures
- 3.4 Maintain confidentiality of records and information in line with privacy principles and statutory and/or organisation policies

4. Evaluate own performance

- 4.1 Seek feedback from *appropriate clinical expert*
- 4.2 Recognise the possible psychological impacts on

ELEMENT**PERFORMANCE CRITERIA**

rescuers involved in critical incidents

4.3 Participate in debriefing/evaluation to improve future response and address individual needs

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes a demonstrated understanding of:

- Awareness of stress management techniques and available support
- First aid management, based on a risk assessment relevant to the workplace or community setting of:
 - abdominal injuries
 - allergic reactions
 - altered and loss of consciousness
 - asthma
 - anaphylaxis
 - bleeding
 - burns – thermal, chemical, friction, electrical
 - cardiac arrest
 - chest pain
 - choking/airway obstruction
 - drowning
 - envenomation – snake, spider, insect and marine bites and stings
 - environmental impact such as hypothermia, hyperthermia, dehydration, heat stroke
 - injuries- cold and crush injuries; eye and ear injuries; head, neck and spinal injuries; minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations, fractures
 - medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions
 - poisoning and toxic substances (including chemical contamination)
 - respiratory distress

- seizures
- shock
- stroke
- substance misuse – common drugs and alcohol, including illicit drugs
- unconsciousness, not breathing or not breathing normally
- Guidelines for provision of first aid as outlined in Australian Resuscitation Council (ARC) Guidelines and guidelines of Australian national peak clinical bodies and State / Territory legislation and regulations
- Social / legal issues including:
 - duty of care
 - confidentiality
 - importance of debriefing
 - need to be culturally aware, sensitive and respectful
 - own skills and limitations
- Understanding of:
 - basic work health and safety requirements in the provision of first aid
 - basic principles and concepts underlying the practice of first aid
 - chain of survival
 - infection control principles and procedures, including use of standard precautions
 - priorities of management in first aid when dealing with life threatening conditions
 - procedures for dealing with major and minor injury and illness
- Understanding of the use of an Automated External Defibrillator (AED), including when to use and when not to
- Understanding the causes of asphyxia due to body position

Essential skills:

It is critical that the candidate demonstrate the ability to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Apply first aid principles
- Call an ambulance and/or medical assistance according to relevant circumstances and report casualty(s) condition
- Communicate effectively and assertively in an incident
- Conduct an initial casualty assessment
- Management of:
 - Anaphylaxis using adrenalin auto-injector
 - Avoiding asphyxia due to body position
 - Bronchospasm using bronchodilator and spacer device
 - Cardiac arrest using single rescuer procedure, including the demonstration of a seamless changeover between operators

- External haemorrhage
- Fractures, sprains and strains using arm slings, roller bandages and other appropriate immobilisation techniques
- Unconscious casualty including using a recovery position
- Demonstrate:
 - ability to call an ambulance
 - consideration of the welfare of the casualty
 - safe manual handling
 - site management to prevent further injury
 - understanding of causes contributing to asphyxia due to body position
- Demonstrate correct procedures for performing CPR using a manikin, including standard precautions (i.e. as per unit *HLTCPR211A Perform CPR*)
- Demonstrate infection control, including use of standard precautions
- Evaluate own response and identify appropriate improvements where required
- Follow State and Territory work health and safety legislative requirements
- Make prompt and appropriate decisions relating to managing an incident in the workplace
- Plan an appropriate first aid response in line with established first aid principles, ARC Guidelines and guidelines of Australian national peak clinical bodies, industry standards and State / Territory legislation and regulations and respond to contingencies in line with own skills
- Prepare a written incident report or provide information to enable preparation of an incident report
- Provide assistance with self-medication as per subject's own medication regime and/or administer medication in line with State/Territory legislation and regulations, organisation policies and any available medical/pharmaceutical instructions
- Unpack, activate and follow prompts of an AED

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package. The evidence guide supplements assessment requirements that apply to all units in this Training Package. Users of this evidence guide should first read the package's assessment guidelines.

- Critical aspects of assessment:*
- The individual being assessed must provide evidence of essential knowledge and essential skills
 - Competence should be demonstrated working individually and as part of a first aid team
 - Consistency of performance should be demonstrated over the required range of situations relevant to the

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package. The evidence guide supplements assessment requirements that apply to all units in this Training Package. Users of this evidence guide should first read the package's assessment guidelines.

workplace or community setting

- Currency of first aid knowledge and skills is to be demonstrated in line with ARC Guidelines and guidelines of Australian national peak clinical bodies and State / Territory legislation and regulations
- Context and resources required for assessment:*
- Skills in performing first aid procedures are to be assessed through demonstration, with questioning to confirm essential knowledge
 - Demonstration of first aid procedures over the required range of situations relevant to the workplace setting must be demonstrated using standard precautions and first aid equipment including roller bandages, triangular bandages, other trauma dressings, bronchodilator and spacer device, adrenalin auto-injectors and AED
 - For assessment purposes, demonstration of skills in CPR procedures requires using a model of the human body (resuscitation manikin) in line with ARC Guidelines

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

Related units:

This unit incorporates the content of units:

- HLTCPR211A Perform CPR
- HLTFA211A Provide basic emergency life support

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Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Contextualisation to address specific requirements may include:

- First aid provision under specific constraints or circumstances (e.g. in confined spaces, in maritime work environment or in work environment involving identified risks/hazards)
- Focus on first aid management of specific types of injury

Established first aid principles and procedures include:

- Australian Resuscitation Council Guidelines
- Guidelines of Australian national peak clinical bodies
- Primary First Aid Principles to:
 - Preserve life
 - Prevent illness, injury and condition(s) becoming worse
 - Promote recovery
 - Protect the unconscious casualty
- State/Territory legislation and regulations

Hazards may include:

- A source or situation with the potential for harm in terms of human injury or ill-health, damage to property, the environment, or a combination of these
- Relevant hazards may be classified under the headings:
 - Biological hazards
 - Chemical hazards
 - Hazards associated with manual handling
 - Physical hazards

Risks may include:

- Environmental risks
- Exposure to blood and other body substances
- Risks associated with the proximity of other workers and bystanders
- Risks from body position
- Risks from equipment, machinery and substances
- Risks from vehicles
- Risks from first aid equipment
- Risk of further injury to the casualty

Casualty's condition is managed for:

- Abdominal injuries
- Airway obstruction
- Allergic reactions

- Altered and loss of consciousness
- Bleeding
- Body position
- Burns – thermal, chemical, friction, electrical
- Cardiac arrest
- Chest pain
- Choking/airway obstruction
- Drowning
- Envenomation – snake, spider, insect and marine bites and stings
- Environmental impact such as hypothermia, hyperthermia, dehydration, heat stroke
- Injuries: cold and crush injuries; eye and ear injuries; head, neck and spinal injuries; minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations, fractures
- Medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions
- Poisoning and toxic substances (including chemical contamination)
- Respiratory distress
- Seizures
- Shock
- Stroke
- Substance misuse – common drugs and alcohol, including illicit drugs
- Unconsciousness, not breathing or not breathing normally
- Infection control
- Legal and social responsibilities of first aider
- The setting in which first aid is provided, including:
 - industry/site specific regulations, codes etc.
 - location and nature of the incident
 - location of emergency services personnel
 - situational risks associated with, for example, electrical and biological hazards, weather, motor vehicle accidents
 - State and Territory work health and safety legislative requirements
 - workplace policies and procedures
 - WHS requirements
- The use and availability of first aid equipment and

First aid management must take into account:

- resources
- Resources and equipment are used appropriate to the risk to be met and may include:*
- AED
 - Auto-injector
 - Bronchodilator and spacer device
 - First aid kit
 - Puffer/inhaler
 - Resuscitation mask or barrier
- Appropriate clinical expert may include:*
- Ambulance officer/paramedic
 - Appropriately qualified health care professional
- Report details should include:*
- Time
 - Description of injury/illness
 - First aid management
 - Incident details
 - Location
 - Vital signs
- Report details may include:*
- Administration of medication including:
 - date
 - dose
 - person administering
 - time
 - Fluid intake/output, including fluid loss via:
 - blood
 - faeces
 - urine
 - vomit
 - Injury report forms
 - Workplace documents as per organisation requirements

Unit Sector(s)

Not Applicable

HLTFA403C Manage first aid in the workplace

Modification History

HLT07 Version 4	HLT07 Version 5	Comments
HLTFA403B Manage first aid in the workplace	HLTFA403C Manage first aid in the workplace	ISC upgrade changes to remove references to old OHS legislation and replace with references to new WHS legislation. Updated unit codes to First Aid references.

Unit Descriptor

Descriptor

This unit addresses the establishment and maintenance of facilities to enable or facilitate the provision of appropriate first aid in the workplace

Application of the Unit

Application

The skills and knowledge described in this competency unit are suitable for those in nominated workplace first aider roles

Training Package users should ensure implementation is consistent with any specific workplace and/or relevant legislative requirements in relation to WHS and provision of first aid

Application of these skills and knowledge should be contextualised as required to address specific industry, enterprise or workplace requirements and to address specific risks and hazards and associated injuries

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency. The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1. Establish a workplace first aid facility | <p>1.1 Plan a <i>first aid facility</i> in the workplace to address <i>workplace and legislative requirements</i></p> <p>1.2 Identify potential <i>workplace hazards</i> and assess <i>associated risks</i> as a basis for determining <i>first aid resource</i> requirements</p> <p>1.3 Identify and prepare first aid equipment and resources required to address identified workplace requirements</p> <p>1.4 Identify personnel requirements in line with legislative and workplace requirements</p> <p>1.5 Establish and maintain links with relevant <i>first aid bodies and professional organisations</i> to maintain currency in the field and for referral purposes</p> <p>1.6 Access and provide information in the workplace to encourage risk minimisation and facilitate access to first aid facilities as appropriate</p> |
| 2. <i>Manage</i> a workplace first aid facility | <p>2.1 Monitor and maintain availability of adequate resources to support workplace first aid response</p> |

ELEMENT**PERFORMANCE CRITERIA**

- 2.2 Conduct regular inspections of stock and equipment to ensure currency and operational readiness in line with workplace requirements
- 2.3 Ensure equipment is recovered and reprocessed and that waste is disposed of safely according to legislative and workplace procedures
- 2.4 Ensure equipment and resources are stored and maintained in line with relevant legislation and manufacturer's/supplier's instructions
- 2.5 Contribute to the review of risks in the workplace and validation of organisation policies and procedures relating to the provision of first aid
- 2.6 Contribute to planning for response to major workplace incidents
- 2.7 Deploy appropriate equipment, resources and personnel to ensure timely and effective first aid response in line with workplace requirements
- 2.8 Use safe manual handling techniques
3. Manage workplace first aid records
- 3.1 Ensure *documentation* is completed as required according to legislation and workplace procedures
- 3.2 Maintain first aid records in line with legislative requirements and workplace security practices
- 3.3 Send relevant documents to appropriate bodies in line with workplace and legislative requirements
- 3.4 Maintain confidentiality of records and information in line with privacy principles and statutory and/or organisation policies
4. Evaluate the provision of first aid in the workplace
- 4.1 Evaluate management of workplace incidents and develop an action plan in consultation with relevant parties to improve first aid response in the workplace if required
- 4.2 Participate in debriefing/evaluation in order to improve future operations and address individual needs
- 4.3 Ensure first aid response is provided in a culturally aware, sensitive and respectful manner
- 4.4 Implement and evaluate workplace management

ELEMENT**PERFORMANCE CRITERIA**

procedures in accordance with risk assessment

4.5 Formulate and review contingency planning to identify and select alternative management principles and procedures as required

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Working knowledge of:
 - Australian Resuscitation Council (ARC) Guidelines relating to provision of first aid
 - company/organisation standard operating procedures (SOPS)
 - first aid risk assessment practices and procedures
 - first aiders' skills and limitations in relation to first aid response in the workplace
 - how to gain access to and interpret Safety Data Sheets (SDS)
 - legal responsibilities and duty of care
 - occupational health and safety requirements in the provision of first aid
 - priorities of management in first aid
 - procedures for dealing with major and minor accidents in the workplace
 - safe storage and handling of medication in the workplace
- First aid equipment and resources to manage injuries and illnesses addressed in HLTFA311A: Apply first aid and HLTFA412A: Apply advanced first aid
- First aid management procedures for conditions identified in the Range Statement
- Infection control principles and procedures, including using standard precautions
- State/territory regulations, legislation and policies relating to:
 - currency of first aid skills and knowledge
 - first aid training
 - occupational health and safety requirements in the provision of first aid

REQUIRED SKILLS AND KNOWLEDGE

- workplace first aid provision
- Stress management techniques and available support
- Social issues, with particular reference to workplace culture, issues and resources and associated organisation requirements:
 - importance of first aid response to be culturally aware, sensitive and respectful
 - debriefing counselling procedures
 - consent and confidentiality
 - own skills and limitations

Essential skills:

It is critical that the candidate demonstrate the ability to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Apply first aid principles in the workplace
- Assess workplace first aid requirements
- Communicate effectively and assertively and show leadership in an incident
- Conduct an initial casualty assessment and prioritisation
- Conduct/review first aid risk assessment
- Demonstrate:
 - adequate infection control procedures - use of standard precautions
 - consideration of the welfare of casualties and first aiders
 - incident management skills
 - safe manual handling
 - safe storage and handling of medication in the workplace
 - safe storage and handling procedures for pressurised gases
- Implement WHS guidelines
- Interpret, use and maintain records of the range of documentation required by the workplace and regulatory authorities
- Maintain first aid equipment and resources in operational condition
- Make prompt and appropriate decisions relating to managing an incident in the workplace
- Manage a first aid response in an identified workplace context
- Plan an appropriate first aid response in line with established first aid principles, ARC Guidelines and/or State/Territory regulations, legislation and policies and respond appropriately to contingencies in line with own level of skills and knowledge
- Take into account opportunities to address waste minimisation, environmental responsibility and sustainable practice issues
- Use high level literacy and numeracy skills as required to read, interpret, address and

REQUIRED SKILLS AND KNOWLEDGE

communicate guidelines, protocols and reporting requirements

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

- Critical aspects of assessment:*
- The individual being assessed must provide evidence of specified essential knowledge as well as skills
 - Consistency of performance should be demonstrated over the required range of situations relevant to the workplace
 - Currency of first aid knowledge and skills is to be demonstrated in line with state/territory regulations, legislation and policies, ARC and industry guidelines

- Interdependence of units:*
- Competence in this unit may be assessed individually or with other related competency units, such as:
- Occupational health and safety
 - Risk assessment
 - Emergency procedures

- Access and equity considerations:*
- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
 - All workers should develop their ability to work in a culturally diverse environment
 - In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
 - Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

EVIDENCE GUIDE

Related units:

This unit should be assessed either after or in conjunction with achievement of the following related competency unit:

- HLTFA412A Apply advanced first aid

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Workplace first aid facility may involve:

- First aid room/clinic
- First aid kits suited to specific workplace needs
- First aid equipment and resources
- Availability of personnel trained to provide first aid

Workplace first aid management must take into account:

- Workplace policies and procedures
- Industry/site specific regulations, codes
- Workplace WHS requirements
- State and territory workplace health and safety legislative requirements

Workplace and legislative requirements for a first aid facility include:

- State/territory regulations, legislation and policies
- Specific industry requirements, regulations and/or WHS issues
- Specific hazards present in the workplace
- Number of employees in the workplace
- Number of different workplace sites/locations
- Proximity to local services, including doctors, hospital, ambulance and other emergency services

RANGE STATEMENT

First aid resources may include but are not limited to:

Non-consumables:

- Equipment, such as:
 - oxygen resuscitation/cylinders
 - AED
 - thermometers
 - auto-injectors
 - back boards
 - stretchers
 - soft bag resuscitator
 - first aid kit
 - casualty's medication
 - analgesic inhalers
 - analgesic gas equipment
 - resuscitation mask or barrier
 - spacer device
 - cervical collars
 - Personal Protective Equipment
- Relevant texts and documentation, such as:
 - Australian Resuscitation Council Guidelines
 - first aid principles, policies and procedures
 - reference materials including SDSs, relevant Occupational Health and Safety Act and Regulations
 - first aid code of practice/compliance codes
 - workplace records and blanks
- Communication systems and equipment

First aid resources may include but are not limited to:

Consumables:

- First aid kits, including bandages, tape, scissors, splinter removers, antiseptic, eye management, disinfectants, resuscitation masks, emergency numbers and contacts, etc
- Dressings
- Ointments
- Cold packs
- Analgesics

RANGE STATEMENT

- Splints
- Sharps disposal
- Bio-hazardous waste bags/bins
- Medical grade oxygen
- Bandages
- Medication
- Personal protective equipment
- Eye wash
- Disinfectants
- Bronchodilators

- Workplace hazards and risks may include:*
- Hazards associated with workplace equipment, machinery, substances and processes
 - Environmental risks
 - Risks associated with first aid response involving:
 - first aid equipment (oxygen cylinders, AED)
 - exposure to blood and other body substances
 - risk of further injury to the casualty
 - risks associated with the proximity of other workers and bystanders

- First aid bodies and professional organisations may include:*
- Australian Resuscitation Council (ARC)
 - Support Groups
 - Registered Providers/Authorities
 - Emergency services

- First aid management skills must include:*
- Administration of analgesic gases in accordance with ARC Guidelines, state/territory regulations, legislation and policies and industry requirements
 - CPR
 - Infection control
 - AED (where available)

- First aid management must account for:*
- Location and nature of the workplace
 - Environmental conditions e.g. electricity, biological risks, weather, motor vehicle accidents
 - Location of emergency services personnel
 - Number of casualties and potential casualties

RANGE STATEMENT

- Use and availability of first aid equipment, resources and pharmaceuticals
- Types of dangers/risks to the casualty and any others in the vicinity of the situation
- Confined spaces, subject to industry need

Documentation may include:

- Incident/injury reports
- Casualty history forms
- Disease notification
- Workcover forms
- Medication registers
- Workers' compensation
- Day book
- Pre-participation records (sport)
- Medical histories
- Management records
- Stock records
- Infection control records
- Training records
- First aid risk assessment

Unit Sector(s)

Not Applicable

HLTFA412A Apply advanced first aid

Modification History

HLT07 Version 4	HLT07 Version 5	Comments
HLTFA402C Apply advanced first aid	HLTFA412A Apply advanced first aid	Updated in V5 - Unit version identifier updated, changes to competency outcomes of first aid units

Unit Descriptor

Descriptor

This unit deals with the provision of advanced first aid response, life support, management of casualty(s), the incident and other first aiders, until the arrival of medical or other assistance, and provision of support to other providers

This unit builds on HLTFA311A: Apply first aid to include additional skills and use of a range of equipment

Application of the Unit

Application

These skills and knowledge may be applied in a range of situations, including community and workplace settings

Training Package users should ensure implementation is consistent with any specific workplace and/or relevant legislative requirements in relation to first aid, including State/Territory requirements for currency

Application of these skills and knowledge should be contextualised as required to address specific industry, enterprise or workplace requirements and to address specific risks and hazards and associated injuries

Competency outcomes in advanced resuscitation

must be equivalent to unit:

- HLTFA404C Apply advanced resuscitation techniques

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Pre-requisite units

This unit must be assessed after successful achievement of pre-requisite:

- HLTFA311A Apply first aid

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

1. Assess the situation

PERFORMANCE CRITERIA

1.1 Identify, assess and minimise *hazards* that may pose a risk of injury or illness to self and others

1.2 Assess *risks* to first aider and others and determine appropriate response to ensure prompt control

ELEMENT**PERFORMANCE CRITERIA**

of situation

- 1.3 Ascertain and prioritise need(s) for emergency services/medical assistance and undertake triage where required
 - 1.4 Deploy *resources* to appropriate locations as required in line with workplace procedures
2. Manage the casualty(s)
- 2.1 Determine and explain the nature of *casualty's injury/condition* and relevant first aid procedures to provide comfort
 - 2.2 Respond to the casualty in a culturally aware, sensitive and respectful manner
 - 2.3 Seek consent for *management* of the casualty's injury/illness from person(s) where relevant
 - 2.4 Determine and implement welfare procedure according to casualty(s) needs
 - 2.5 Control effects of injury and determine and apply appropriate *first aid management* to meet the needs of the casualty and situation
 - 2.6 Assist with *self-medication* in accordance with State/Territory regulations, legislation and policies and manufacturer's/supplier's instructions subject to casualty's regime
 - 2.7 Monitor casualty's condition and respond in a timely manner in accordance with established first aid principles and procedures
 - 2.8 Correctly operate basic life support *equipment* according to relevant legislation and manufacturer's/supplier's instructions
 - 2.9 Apply safety procedures for operation of pressurised gases
 - 2.10 Use safe manual handling techniques
 - 2.11 Finalise casualty *management* according to casualty's needs and first aid principles
3. Coordinate first aid activities until arrival of medical assistance
- 3.1 Identify available *resources* required and establish communication links with appropriate personnel, emergency management services and medical assistance as appropriate

ELEMENT**PERFORMANCE CRITERIA**

- 3.2 Deploy correct amount of *resources* to appropriate locations in an effective manner to ensure timely arrival of required resources
- 3.3 Document the provision of resources and recommend modifications as required
- 3.4 Monitor the condition of casualties in accordance with first aid principles and workplace procedures
- 3.5 Coordinate evacuation of casualties according to relevant evacuation procedures
- 3.6 Arrange support services for personnel involved in the incident in accordance with relevant principles and procedures
4. Communicate essential incident details
- 4.1 Maintain communication with relevant personnel using appropriate media and equipment
- 4.2 Communicate first aid information with other providers/carers to meet their needs and in accordance with workplace procedures
- 4.3 Calmly provide information to reassure casualty, adopting a communication style to match the casualty's level of consciousness
- 4.4 Prepare an incident report in line with organisation requirements
- 4.5 Maintain confidentiality of records and information in line with privacy principles and statutory and/or organisation policies
5. Evaluate the incident
- 5.1 Evaluate management of the incident and where required develop an action plan in consultation with relevant parties
- 5.2 Participate in debriefing/evaluation in order to improve future operations and address individual's needs
- 5.3 Formulate and review contingency planning to identify and select alternative management principles and procedures as required

Required Skills and Knowledge

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes a demonstrated understanding of:

- Awareness of stress management techniques and available support
- Complications and associated methods of management for conditions, based on a risk assessment relevant to the workplace or community setting of:
 - abdominal injuries
 - allergic reactions
 - altered and loss of consciousness
 - asthma
 - anaphylaxis
 - bleeding
 - burns – thermal, chemical, friction, electrical
 - cardiac arrest
 - chest pain
 - choking/airway obstruction
 - drowning
 - envenomation – snake, spider, insect and marine bites and stings
 - environmental impact such as hypothermia, hyperthermia, dehydration, heat stroke
 - injuries- cold and crush injuries; eye and ear injuries; head, neck and spinal injuries; minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations, fractures
 - medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions
 - pain relief
 - poisoning and toxic substances (including chemical contamination)
 - respiratory distress
 - seizures
 - shock
 - stroke
 - substance misuse – common drugs and alcohol, including illicit drugs
 - unconsciousness, not breathing or not breathing normally
- First aid management procedures in accordance with ARC Guidelines, guidelines of Australian national peak clinical bodies, State/Territory regulations, legislation and policies and organisation requirements including:
 - management of anaphylactic shock reaction
 - management of acute exacerbations of asthma

- spinal care
- use of AED, oxygen, bronchodilator
- use of analgesic gases
- First aid management procedures may also relate to emergency childbirth
- Incident management procedures including:
 - awareness of confined spaces and dangerous places
 - basic triage for a multiple casualty incident
 - coordinate activities of other first aiders
 - manual handling, hazardous substances, dangerous goods or chemicals
 - removal of casualty to safe area, if appropriate
 - safe access to the casualty
- Safety procedures for the operation of pressurised gases
- Social issues, especially in particular workplace or community context(s) in which first aid is to be applied, including:
 - confidentiality
 - importance of debriefing
 - need to be culturally aware, sensitive and respectful
 - own skills and limitations
- State and regulatory requirements relating to currency of skill and knowledge
- Working knowledge of:
 - advanced resuscitation techniques as per *HLTFA404C Apply advanced resuscitation techniques*
 - ARC Guidelines, guidelines of Australian national peak clinical bodies and/or State/Territory regulations, legislation and policies relating to provision of first aid
 - basic anatomy (skeleton, muscles, joints, bones), physiology and toxicology
 - capabilities of emergency management services
 - company/organisation standard operating procedures (SOPs)
 - first aiders' skills and limitations
 - how to gain access to and interpret Safety Data Sheets (SDS)
 - infection control principles and procedures, including using standard precautions
 - legal responsibilities and duty of care, including confidentiality
 - priorities of management in first aid
 - procedures for dealing with major and minor accidents in the workplace
 - safe storage and handling procedures for pressurised gases
 - work health and safety requirements in the provision of first aid.

Essential skills:

It is critical that the candidate demonstrate the ability to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Administer medication in line with State/Territory regulations, legislation and policies and any available medical/pharmaceutical instructions
- Apply advanced resuscitation techniques as per *HLTFA404C Apply advanced resuscitation techniques*
- Call an ambulance and/or medical assistance according to relevant circumstances and report casualty's condition
- Communicate effectively and assertively and show leadership in an incident
- Comply with WHS legislation
- Conduct an initial casualty assessment
- Demonstrate:
 - adequate infection control procedures
 - consideration of the welfare of the casualty
 - safe manual handling
 - safe storage and handling procedures for pressurised gases
- Demonstrate procedure for control of external bleeding
- Demonstrate procedure for management of airway in the unconscious casualty including the safe and effective use of any airway adjuncts
- Demonstrate proficiency in the safe and effective use of any fracture immobilisation equipment taught
- Demonstrate the application of first aid principles
- Demonstrate the correct posturing of a casualty
- Interpret and use listed documents
- Make prompt and appropriate decisions relating to managing an incident in the workplace
- Manage specific injuries/illnesses and conditions as identified in the Essential Knowledge for this competency unit
- Plan an appropriate first aid response in line with established first aid principles, policies and procedures, ARC Guidelines, guidelines of Australian national peak clinical bodies, State/Territory legislation and regulations and industry requirements and respond appropriately to contingencies in line with own skills
- Prepare a written incident report or provide information to enable preparation of an incident report
- Provide assistance with self-medication as per subject's own medication regime and in line with State/Territory legislation, regulations and policies and any available medical/pharmaceutical instructions
- Use a range of first aid equipment as outlined in the Range Statement
- Use literacy and numeracy skills as required to read, interpret and apply guidelines
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Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the

EVIDENCE GUIDE

Assessment Guidelines for this Training Package.

Critical aspects of assessment:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Competence should be demonstrated working individually and, where appropriate, as part of a first aid team
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace or community setting
- Currency of first aid knowledge and skills is to be demonstrated in line with state/territory regulations, legislation and policies, ARC and industry guidelines

Method of assessment may include:

- Skills in performing first aid procedures are to be assessed through demonstration, with questioning to confirm essential knowledge
- Skills may be assessed through simulations, using anatomical models, manikins or in a high fidelity simulation centre
- For assessment purposes, demonstration of skills in CPR procedures requires using a model of the human body (resuscitation manikin) in line with ARC Guidelines

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

Range Statement

Unit Sector(s)

Not Applicable

ICAICT308A Use advanced features of computer applications

Modification History

Version	Comments
ICAICT308A	This version first released with <i>ICA11 Information and Communications Technology Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to use computer applications employing advanced features. It involves manipulating data and accessing support resources to solve routine problems.

Application of the Unit

This unit applies to individuals who are expert users or advanced users and capable of tutoring colleagues in the use of commercial applications.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold</i>

	<i>italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>
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Elements and Performance Criteria

1. Manipulate data	<p>1.1 Employ <i>advanced features</i> of <i>applications</i> in the preparation and presentation of data</p> <p>1.2 Transfer data between applications, linking and embedding related data files as required</p> <p>1.3 Create and employ <i>objects</i>, macros and templates for routine activities</p> <p>1.4 Use shortcuts and features to increase personal productivity</p>
2. Access and use support resources	<p>2.1 Solve routine problems using support resources</p> <p>2.2 Use online help to overcome difficulties with applications</p> <p>2.3 Solve problems with manuals and training booklets</p> <p>2.4 Access and apply technical support for <i>system</i> problems, using troubleshooting results and alert messages</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - communicate with supervisors and peers
 - seek assistance and expert advice
 - use online help
- literacy skills to interpret technical documentation, equipment manuals and specifications
- planning and organisational skills to prioritise and monitor own work
- problem-solving skills to solve operational problems as they arise
- research skills to source support resources to solve routine problems

- safety awareness skills to work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- technical skills to:
 - apply technical support for system problems
 - operate software applications
 - use applications features
 - use online help.

Required knowledge

- basic knowledge of operating systems software and system tools
- vendor product directions in computer applications
- vendor applications and their features.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • use at least three computer applications employing advanced features and import and export capacities for efficiency and productivity purposes • solve routine problems using support resources.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • site where advanced features of computer applications may be used • computer applications currently used in industry • documents or information containing data suitable to demonstrate advanced features of computer applications • support resources, including online, manuals and training booklets • appropriate learning and assessment support when required • modified equipment for people with special needs.
Method of assessment	A range of assessment methods should be used to assess

	<p>practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • verbal or written questioning to assess candidate's knowledge of: <ul style="list-style-type: none"> • support resources, including online, manuals and training booklets • advanced features of a number of computer applications • direct observation of candidate: <ul style="list-style-type: none"> • manipulating data between applications • creating and employing objects, macros and templates.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate.</p> <p>Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed.</p> <p>Indigenous people and other people from a non-English speaking background may need additional support.</p> <p>In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Advanced features may include:	<ul style="list-style-type: none"> • conditional formatting • cross-referencing • form controls • forms • formulas • graphics
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	<ul style="list-style-type: none"> • hyperlinks • macros • mail merge • master documents • names • object linking and embedding (OLE) • ranges • sections • styles • tables • templates • validation.
<i>Applications</i> may include:	<ul style="list-style-type: none"> • commercial software applications and organisation-specific software: <ul style="list-style-type: none"> • communication packages • database • graphic • presentation functionalities • spreadsheet • word-processing • presentation applications contained in: <ul style="list-style-type: none"> • Claris Works • Lotus Suite • Microsoft Office • Star Office • other similar applications.
<i>Objects</i> may include:	<ul style="list-style-type: none"> • buttons • checkboxes • drop-down lists • option buttons • text boxes.
<i>System</i> may include:	<ul style="list-style-type: none"> • application • business • computers • financial system • information system • management system • network • software.

Unit Sector(s)

General ICT

Custom Content Section

Not applicable.

ICTSUS7235A Use ICT to improve sustainability outcomes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to improve sustainability outcomes through the reduction of environmental, economic and social impacts for a range of industries using ICT based solutions. It involves meeting the requirements for monitoring and reporting of greenhouse gas emissions and using ICT for creating opportunities to improve sustainability by addressing products, services and processes specific to specific enterprises and industries.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.</p>
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Application of the Unit

Application of the unit	<p>This unit is applies to individuals employed as an ICT consultant or with an ICT related role in an organisation. Work normally involves a high degree of autonomy or is within a management team with a high level of responsibility.</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Design and manage a sustainability audit	<p>1.1. Use an audit tool reflects criteria of benchmark, nature of risks, relevant information and data types, evaluation of performance and legislative requirement</p> <p>1.2. Define the scope, objectives and benchmarks for the audit in consultation with relevant stakeholders</p> <p>1.3. Use an <i>audit tool</i> to reflect criteria of benchmark, nature of risks, relevant information and data types, evaluation of performance and legislative requirement</p> <p>1.4. Document requirements for audit resources, timing, schedule and responsibilities consistent with industry</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>best practice and relevant standards</p> <p>1.5.Ensure collection strategies are objective, systematic and that information and data is valid and reliable</p> <p>1.6.Report outcomes clearly and concisely, including benefits to be achieved by adoption of audit report recommendations</p>
<p>2. Monitor energy consumption and emissions</p>	<p>2.1.Analyse requirements of the National Greenhouse and Energy Reporting System (NGERS) and other relevant legislation and industry standards in relation to a range of industries and the needs of specific organisations</p> <p>2.2.Identify links with functional areas and environmental management systems to ensure comprehensive information and data collection</p> <p>2.3.Determine hardware and software required for collecting, collating, analysing and reporting emissions related information and data</p> <p>2.4.Factor requirement for an external audit into the monitoring proposal</p> <p>2.5.Critically evaluate energy consumption and emissions data</p> <p>2.6.Develop improvement strategies based on the review of data</p> <p>2.7.Use industry best practice as a quality benchmark</p>
<p>3. Develop ICT solutions to improve sustainability outcomes</p>	<p>3.1.Research and analyse mitigation and adaptation strategies appropriate for a range of industries</p> <p>3.2.Benchmark and document performance expectations in consultation with relevant stakeholders</p> <p>3.3.Develop and document technical specifications including hardware, software, networking, interface and security requirements</p> <p>3.4.Determine timelines, resources and costs for implementation and ongoing monitoring and maintenance</p> <p>3.5.Analyse the impact of ICT solution in relation to performance benchmarks</p> <p>3.6.Analyse opportunities and develop recommendations to improve sustainability of enterprise products, services and processes</p> <p>3.7.Present report for client sign off</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to read and evaluate complex and formal documents such as legislation and technical reports
- communication skills to consult with stakeholders and liaise with clients
- literacy skills to prepare written reports and other documentation requiring precision of expression and language and structures suited to the intended audience
- research skills to analyse and present information
- technical skills to:
 - conduct an ICT sustainability audit
 - quantify sustainability objectives, targets, achievements and measures
 - use relevant systems and procedures to aid in the achievement of emissions reduction

Required knowledge

- auditing sustainability processes and practices
- corporate social responsibility
- development processes and practices
- hazard identification and control
- industry standards
- legislation framework underpinning sustainability
- principles, practices and available tools and techniques of sustainability management relevant to a range of industries
- relevant ISO standards
- sustainability from a local, national and international perspective
- sustainability including ecological, economic and social issues
- technical performance measurement

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • audit and analyse patterns of energy use • develop monitoring and reporting systems that comply with regulatory requirements • develop a workable implementation strategy • formulate solutions using ICT to reduce emissions • develop benchmarks for reviewing and improving performance.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • relevant reports: <ul style="list-style-type: none"> • government • Intergovernmental Panel on Climate Change (IPCC) • scientific • conference papers • vendor white papers • resources, tools and networking equipment • suitable hardware and software • suitable bandwidth for internet connections • relevant legislation and regulations • manufacturers' technical specifications • relevant ISO standards.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct observation of the candidate managing organisation sustainability • review of analyses, plans and reports completed by the candidate • oral or written questioning to assess required knowledge.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • ICTSUS7236A Manage improvements in ICT

EVIDENCE GUIDE

	<p>sustainability.</p> <p>Aboriginal people and other people from a non-English speaking background may have second language issues.</p> <p>Access must be provided to appropriate learning and assessment support when required.</p> <p>Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed.</p> <p>In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.</p> <p>Where applicable, physical resources should include equipment modified for people with special needs.</p>
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Stakeholders may include:

- clients and customers
- Federal Government
- local government
- management
- non-government organisations (NGOs)

RANGE STATEMENT	
	<ul style="list-style-type: none"> • shareholders • staff • state government • suppliers.
<i>Audit tool</i> may include:	<ul style="list-style-type: none"> • National Carbon Accounting System Data Viewer • National Carbon Accounting Toolbox.
<i>Collection strategies</i> may include:	<ul style="list-style-type: none"> • electricity billing information • hardware sensor devices.
<i>Legislation</i> may include:	<ul style="list-style-type: none"> • Australian Government White paper • Australian Government Green paper • Carbon Pollution Reduction Scheme (CPRS) • Emissions Trading Scheme (ETS).
<i>Industries</i> may include:	<ul style="list-style-type: none"> • building • electricity • logistics • motor.
<i>Hardware</i> may include:	<ul style="list-style-type: none"> • sensors • wireless sensor networks.
<i>Software</i> may include:	<ul style="list-style-type: none"> • avoiding mass extinctions engine (AMEE) • carbon footprint calculators • logical carbon reporting software • online system for comprehensive activity reporting (OSCAR) • statistical analytic software (SAS) carbon reporting software • sustainability SCO2 (Software CO2).
<i>Best practice</i> information may be found in:	<ul style="list-style-type: none"> • 2020 Report • company case studies • vendor white papers.
<i>Mitigation and adaptation strategies</i> may include:	<ul style="list-style-type: none"> • broadband or telepresence • carbon capture and storage (CCS) • geosequestration • household monitoring • monitoring sources of energy that produce CO2 • remote workstation solutions • The Intelligent Office.

Unit Sector(s)

Unit sector	Telecommunications
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Sustainability
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LGACOM401A Administer contracts

Modification History

LGACOM401A Release 2: Layout adjusted.

LGACOM401A Release 1: Primary release.

Unit Descriptor

This unit covers the administration, monitoring and transition of contracts.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish administration procedures	1.1 Administrative processes for contracts are implemented according to council quality improvement 1.2 Contract requirements are confirmed with relevant contract personnel. 1.3 Complaint system is established according to council policy and procedures. 1.4 Consistent and accurate records of contract progress are maintained.
2 Monitor contract time frame and specifications	2.1 Regular inspections of contract services are undertaken to ensure compliance with specifications and program for completion. 2.2 Regular planned progress meetings are held and documented between all contract personnel to ensure problems are identified and resolved early. 2.3 Variations between the specified scope of services and the contract are identified and documented, and relevant personnel are notified without delay. 2.4 Testing of services in progress is carried out as required by the contract and in accordance with legislation, regulations and council policy.
3 Monitor costs	3.1 Contract costs are monitored on a regular basis to ensure that the service is carried out in accordance with financial and contractual requirements. 3.2 Payments for contract services are authorised in accordance with the conditions of contract and delegation of officer. 3.3 Transaction costs are monitored through an established system.
4 Resolve contractual disputes	4.1 Disagreements are investigated to identify cause and validity. 4.2 Terms of resolution are negotiated and agreed. 4.3 Contract provisions for dispute resolution are followed. 4.4 Legal and management advice is sought at an early stage of any dispute to ensure that the contractor has a clear understanding of the council's legal position and that the council is not exposed to undue legal risk. 4.5 Appropriate legal advice is sought at any stage in order to clarify any technical aspects of a dispute.
5 Implement contract transition	5.1 Contract conditions and responsibilities are reviewed with relevant personnel to ensure satisfactory completion of contract.

ELEMENT**PERFORMANCE CRITERIA**

- 5.2 Contract completion is authorised in writing to confirm completed services have been undertaken according to contract objectives and specifications.
- 5.3 Final statement is reconciled.
- 5.4 Contractor performance and level of service are evaluated against agreed benchmark.
- 5.5 End-of-service or renewed contracts are coordinated to meet council requirements.
- 5.6 Quality of contract documentation is assessed.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- negotiation and liaison across a range of internal and external customers
- contingency management
- contract interpretation
- project management
- conflict resolution
- client interaction
- financial and time management

Required Knowledge

- relevant legislation, regulations, codes of practice and policies applicable to the industry and the council, including those relating to environmental/sustainable practice and OHS
- relevant systems and procedures to aid in the achievement of sustainable practice
- contract procedures
- contract law
- knowledge of the contract service
- performance standards and analysis
- complaint procedures
- costing processes

Evidence Guide

Overview of assessment A person who demonstrates competency in this unit will be

requirements	able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.
Critical aspects of evidence to be considered	<ul style="list-style-type: none"> • Maintenance of files relating to records of meetings, payments, progress reports, file notes and discussions. • Effective communication with the contractor. • Monitoring of industry changes. • Making recommendations covering a range of contracts. • Maintenance of WorkCover, OHS and audit processes and up-to-date insurance files. • Monitoring relevant laws, by laws and regulations or best practice on environmental performance and sustainability
Context of assessment	On the job or in a simulated work environment.
Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation • third-party reports from experienced practitioners • completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor.
Evidence required for demonstration of consistent performance	Evidence will need to be gathered over time across a range of variables.
Resource implications	<p>Access to a workplace or simulated case study that provides such resources as:</p> <ul style="list-style-type: none"> • a range of council contract documentation and records • relevant commercial law texts on contracts • relevant council policies and procedures documents.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different

work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Administrative processes for contracts*** may include:
- supervision
 - management
 - monitoring
 - overseeing
- Records of contract progress*** may include:
- photographs
 - data
 - progress reports
 - customer surveys
 - minutes of meetings
- Services*** may include:
- product
 - maintenance
 - supply
 - cleaning
 - waste
 - research
 - environmental initiatives
 - civil
 - child care
 - other council services
- Testing*** may include:
- samples
 - routine checks
 - audits
 - observations
 - meetings
 - laboratory
- Payments*** may include:
- progressive
 - lump sum
- Conditions of contract*** may include:
- tender documentation
 - maintenance plan
 - compliance with sustainable practice guidelines
 - defects liability
- Contractor performance*** is evaluated in terms of:
- adherence to timelines and estimated costs
 - progress towards objectives
 - adherence to quality standards, environmental and sustainability standards and OHS and EEO practices

Unit Sector(s)

Administration.

LGACOM409A Prepare tender documentation

Modification History

LGACOM409A Release 2: Layout adjusted. No changes to content.

LGACOM409A Release 1: Primary release.

Unit Descriptor

This unit covers the scoping of contract services, the preparation of tender documentation and the calling for tenders.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the extent and nature of services to be contracted	1.1. Scope of the <i>services</i> is confirmed and reviewed to ensure <i>parameters</i> meet current requirements.
	1.2. Statutory and council requirements are identified to determine available options.
	1.3. Detailed parameters are specified to enable a complete brief to be prepared.
	1.4. The extent of the contract package is determined.
2. Select appropriate method for tender	2.1. Area to be contracted is examined.
	2.2. Contract options are identified and analysed.
	2.3. Benefits, costs and opportunities of each option are identified.
	2.4. Appropriate contract option is selected.
3. Prepare tender specifications according to council and Australian standards	3.1. Complete and detailed service specifications are prepared consistent with council policy and Australian standards and based on service profile and review.
	3.2. <i>Legislative</i> , environmental, sustainability practices, occupational health and safety and risk management requirements are applied.
	3.3. Quality assurance methods are applied to the preparation of service specifications.
	3.4. Service specifications are prepared in consultation with relevant staff that complement required outcomes.
	3.5. Details on methods, standards, materials, products, contractors and performance period are provided by quality service specifications, as applicable.
4. Prepare evaluation criteria	4.1. A tender review panel or team is selected from appropriate personnel.
	4.2. Criteria are established based on the specifications, product and service required.
	4.3. Criteria are written clearly to enable bids to be compared.
	4.4. Criteria are ranked against council procedures.
5. Prepare tender document	5.1. <i>Tender documents</i> are <i>prepared</i> clearly and concisely.
	5.2. Tender documents are prepared that enable competitive pricing of products.
	5.3. Tender documents are designed to enable valid <i>comparisons</i> between tenders received.
6. Invite tenders	6.1. Invitations are prepared based on the type of tendering method used.

ELEMENT**PERFORMANCE CRITERIA**

- 6.2. Source list is prepared according to council procedures.
- 6.3. *Advertisement* is prepared and placed according to the tender method.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- report and specification writing
- qualitative and quantitative research
- analytical
- consultation with relevant personnel
- specification interpretation
- negotiation with relevant internal and external people
- observation of protocol and probity policies

Required Knowledge

- relevant council policies, procedures and codes of conduct
- sustainability practices
- quality assurance systems
- relevant Australian and industry standards
- statutory and council tender requirements
- contractual processes
- industrial agreements
- statutory council requirements
- tendering codes of practice
- national competition policy

Evidence Guide

Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also

	required to be demonstrated.
Critical aspects of evidence to be considered	<ul style="list-style-type: none"> • Contract authorisation process is undertaken • Appropriate advertisement is placed • Required specifications are produced • Conditions of contract are produced • Industry standard conditions of contract are applied • Confidentiality and probity are observed for both in-house bids and/or external tenders
Context of assessment	On the job or in a simulated work environment.
Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation • third-party reports from experienced practitioners • completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor
Evidence required for demonstration of consistent performance	Evidence will need to be gathered over time across a range of variables.
Resource implications	<p>Access to a workplace or simulated case study that provides the following resources:</p> <ul style="list-style-type: none"> • relevant council policies and procedures • national competition policy information

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Services</i> may include:	<ul style="list-style-type: none"> • works • function • provision • community expectations
<i>Parameters</i> may include:	<ul style="list-style-type: none"> • budget range

- council resources
 - level of risk
 - council policies, such as 'buy local'
- Tendering methodology*** may include:
- lump sum
 - unit rate
 - partnership
 - services process
- Tendering method*** may include:
- expression of interest
 - public tender
 - invitation
 - verbal
 - written
 - in-house bid
 - select tender
- Advertisement*** may include:
- newspaper
 - in-house
 - trade magazines
 - according to council policy
- Legislative requirements*** may include:
- WorkCover
 - risk management
 - occupational health and safety
 - sustainability
 - equal employment opportunity
 - sexual harassment
 - public liability
 - professional indemnity
 - evidence of insurance cover
 - quality assurance
- Tender documents*** may include:
- general conditions
 - special clauses
 - technical conditions
 - standard specifications
 - code of tendering
 - statutory declaration
 - evaluation criteria
 - drawings
 - implementation plan
 - legislative amendments
 - legal endorsement
- Comparative statement*** may include:
- matrix
 - data

- criteria
 - compliance
 - score
- Formalisation* may include:
- contract signing procedure
 - preliminary deposits
- Evaluation* may include:
- previous projects
 - verification of quality accreditation
 - capacity
 - capability
 - risk
 - security
 - service

Unit Sector(s)

Administration.

Competency field

Not applicable.

LGACOM502B Devise and conduct community consultations

Modification History

LGACOM502B Release 2: Layout adjusted. Range statement edited.

LGACOM502B Release 1: Primary release.

Unit Descriptor

This unit covers devising and conducting community consultations and reporting on results. The vital and unique responsibility councils have to engage and consult with communities in order to respond to the needs of the community in a timely and effective manner is recognised.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be

consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Devise consultation strategies	1.1. A range of consultation strategies is identified and assessed for suitability. 1.2. <i>Interested and affected parties</i> are identified. 1.3. <i>Resources</i> required to conduct consultation are assessed. 1.4. <i>Consultation strategies</i> are chosen that <i>enable and encourage relevant groups</i> or individuals to be involved. 1.5. <i>Legislative</i> and council requirements are reviewed to ensure strategies meet all criteria.
2. Conduct consultations	2.1. <i>Information</i> is prepared that is clear, accurate and appropriate to the needs of all parties. 2.2. All people involved in conducting the consultations are briefed on the process of consultation and the parties involved. 2.3. <i>Information is presented</i> to affected parties at an appropriate time and place. 2.4. <i>Access and equity</i> requirements are implemented in the consultations. 2.5. Measures to expedite community consultation are taken to ensure consultation occurs within an identified time frame. 2.6. Consultation is undertaken in an orderly manner to ensure all viewpoints are canvassed.
3. Record, analyse and report on results	3.1. Public consultation responses and processes are formatted to enable informed decision making to proceed. 3.2. Appropriate suggestions for improvement are incorporated into design parameters. 3.3. Summaries of responses and adopted amendments are provided to interested parties to ensure public consultation is recognised. 3.4. Other issues raised during consultation are directed to relevant department or person to respond to community concern. 3.5. An accurate report on community consultation that includes recommendations is prepared to enable informed decision making to occur.

ELEMENT**PERFORMANCE CRITERIA**

- 3.6. The overall effectiveness of the consultation process is reviewed and evaluated and action is taken where necessary.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- consultation, presentation, negotiation and report writing
- research
- planning and organising
- information gathering and analysis

Required Knowledge

- relevant council policies and procedures
- relevant legislation, including planning and anti-discrimination
- relevant sections of local government act
- access and equity issues
- strategies for consultation
- codes of conduct and ethics

Evidence Guide**Overview of assessment requirements**

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

Critical aspects of evidence to be considered

The demonstrated ability to devise and conduct community consultations where:

- consultation ensures council's image or reputation is maintained or enhanced
- community consultation produces valid and useful information

Context of assessment	Assessment of performance requirements in this unit should be undertaken within the context of the local government framework. Competency is demonstrated by performance of all stated criteria, including the Range of Variables applicable to the workplace environment.
Method of assessment	The following assessment methods are suggested: <ul style="list-style-type: none"> • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation • third-party reports from experienced practitioners • completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor
Evidence required for demonstration of consistent performance	Evidence should be gathered over a period of time in a range of actual or simulated management environments.
Resource implications	Access to a range of real or simulated consultation processes including: <ul style="list-style-type: none"> • public and community meetings and forums • surveys and door knocks • appropriate communications equipment and aids such as overhead projectors and computer-based presentations

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Interested and affected parties</i> may include:	<ul style="list-style-type: none"> • community groups • other authorities • individuals • emergency authorities (police, fire and ambulance) • private sector business interests • special interest groups • experts
<i>Resources</i> may include:	<ul style="list-style-type: none"> • human

- financial
 - locations
- Consultation strategies*** may include:
- public meetings
 - phone-ins
 - questionnaires
 - informal gatherings
 - door knocks
 - council meetings
- Enabling and encouraging relevant groups*** to be involved may include:
- physical accessibility
 - diverse language needs
 - culture, including Indigenous, youth and non-English speaking background
 - physical environment
 - number of people
- Legislation*** may include:
- local government
 - anti-discrimination
 - planning
- Information*** may include:
- written and oral records
 - anecdotes
 - reports
 - instructions
 - directions from supervisor or management
 - interviews
 - formal and informal team meetings
 -
- Access and equity*** may include:
- subject matter
 - manner in which consultations are conducted
 - physical accessibility
 - community profile
 -
 -
- Presentation of information*** may include:
- graphics
 - models
 - computer animations
 - video displays
 - overhead transparencies
 - handouts
 - display plans
 - interpreter service

Unit Sector(s)

Common

Competency field

Competency Field

co-requisite unit/s

Co-requisite Unit/s

LGAEHRR504C Implement public environmental health education programs

Modification History

LGAEHRR504C Release 2: Layout adjusted.

LGAEHRR504C Release 1: Primary release.

Unit Descriptor

This unit covers the development and delivery of public environmental health education, promotion and awareness strategies, including campaigns and programs.

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

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance within councils of varying size and locations. Knowledge of the legislation and regulations within which councils must operate is essential. The role of council staff, elected members and management in protecting and managing the natural and built environment must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where **bold italicised** text is used, further information is detailed in the

Unit of Competency	Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop environmental health education, promotion and awareness strategies	<p>1.1 Goals and objectives for health education, promotion and awareness are established in accordance with <i>council requirements</i>.</p> <p>1.2 Information to assist in needs analysis is identified, researched and collated.</p> <p>1.3 Health surveys that identify <i>community health needs</i> are developed.</p> <p>1.4 Existing services and strategies are reviewed and evaluated to ensure relevance.</p> <p>1.5 Community networks are established and maintained to ensure broad exposure to local development needs.</p>
2. Implement environmental health education, promotion and awareness strategies	<p>2.1 Appropriate <i>health education, promotion and awareness programs</i> are developed and implemented based on community development needs and in accordance with council policy.</p> <p>2.2 Programs are implemented using appropriate educational, promotional and awareness activities and responding to state <i>legislative requirements</i>.</p> <p>2.3 Health education, promotional and awareness programs are monitored and evaluated in conjunction with the community to assess performance in relation to program goals and objectives.</p>
3. Undertake marketing programs	<p>3.1 Opportunity for a <i>marketing</i> program is identified from the market place.</p> <p>3.2 <i>Viability</i> of a program is assessed by <i>internal and external consultation</i>.</p> <p>3.3 Reports are prepared for management and council with recommendations and supporting information.</p> <p>3.4 Marketing program is implemented and monitored to ensure objectives are met within budget, resource and time limitations.</p> <p>3.5 Program is reviewed and assessed using consumer response and internal audits.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- information gathering and research
- survey design
- cooperative and professional communication and interaction with a wide range of stakeholders
- problem solving and conflict management
- well developed and effective written communication
- implementation of promotional strategies
- program planning
- networking
- implementation of public consultation strategies
- implementation of program evaluation strategies
- participation in public presentations
- budget management
- monitoring own work and adjusting to meet agreed standards and expectations
- engaging in activities that promote own ongoing learning requirements, which may include maintaining current knowledge of legislation and common law
- using technology relevant to the job/role, which may include the use of computers and other relevant office technology

Required Knowledge

- council structure and services
- relevant council procedures
- relevant legislation and standards
- principles of positive interaction with diverse groups within the community
- community consultation and information strategies
- local health services and relevant professionals
- council's health education policy
- current and potential health issues affecting the community

Evidence Guide

Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the elements to the required performance level detailed in the performance criteria. The unit's skill and knowledge requirements must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the

Critical aspects of evidence to be considered

performance of the unit are also required to be demonstrated.

The demonstrated ability to:

- establish and maintain community networks
- establish appropriate goals for health education, promotion and awareness in accordance with council requirements
- develop, implement and evaluate appropriate health education, promotion and awareness programs
- market, implement and monitor programs to ensure objectives are met
- report, review and assess programs

Context of assessment

On the job or in a simulated work environment.

Method of assessment

The following assessment methods are suggested:

- observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies
- written and oral questioning to assess knowledge and understanding
- completion of workplace documentation
- third-party reports from experienced practitioners
- completion of self-paced learning materials, including personal reflection and feedback from trainer, coach or supervisor

Evidence required for demonstration of consistent performance

Competency must be demonstrated in all elements across a range of variables relevant to council's size, location and strategic plan.

Resource implications

Access to a workplace or simulated case studies that provide relevant equipment and materials, such as:

- videotapes
- pamphlets
- health legislation
- council policies and procedures

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Council requirements may include:

- council policies, procedures and guidelines

- strategic, business and management plans
 - local ordinances, laws and by-laws
 - state legislation
 - ethnic or minority groups
 - demographic groups
 - immunisation
 - nutrition
 - smoking
 - sun smart
 - health effects of climate change, such as heat stress
 - mosquito control
 - sexually transmitted diseases
 - council
 - public health plan
 - public health policy
 - media releases
 - personal skill development
 - community action strengthening
 - supportive environments
 - reorienting services
 - behavioural and environmental adaptation
 - community development
 - federal
 - state or territory
 - local government
 - preparation and use of materials, such as:
 - audiovisual materials
 - pamphlets and books
 - software
 - badges
 - ties
 - stickers
 - professional consultancy
 - online support
 - profit or loss
 - break-even
 - community value
 - staff
 - councillors
 - schools
- Community health needs** may include special requirements of:
- Health education, promotion and awareness programs** may include:
- Legislative requirements** may include:
- Marketing** may include:
- Viability** may include:
- Internal and external consultation** may include:

- police
- experts
- community
- parents
- funding organisations
- regional groups
- relevant agencies, including welfare agencies
- hospitals
- medical institutes
- church groups
- industry and professional expertise
- government departments
- marketing departments and consultants
- media developers

Unit Sector(s)

Health and Environment

LGAPLEM404A Prepare and present geographic information systems data

Modification History

LGAPLEM404A Release 2: Layout adjusted.

LGAPLEM404A Release 1: Primary release.

Unit Descriptor

This unit covers designing, generating and producing information to meet user requirements.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where **bold italicised** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Identify presentation requirements	<p>1.1 Presentation requirements are determined in consultation with end user.</p> <p>1.2 Extent, content and intended use of output are considered in recommending presentation format and medium.</p>
2 Format and present data	<p>2.1 Relevant data elements are assembled.</p> <p>2.2 Procedures are designed for formatting data into compatible format.</p> <p>2.3 <i>Data formats</i> are selected to meet customer requirements.</p> <p>2.4 Information is presented to meet user requirements using suitable media in an attractive, informative and useable manner.</p> <p>2.5 Information is presented in line with appropriate Australian standards.</p>
3 Ensure customer satisfaction	<p>3.1 Work is completed in line with council <i>quality requirements</i>.</p> <p>3.2 Feedback is sought from customer regarding satisfaction with information and presentation.</p> <p>3.3 Any areas of dissatisfaction are resolved in line with council policies and procedures.</p> <p>3.4 Customer feedback is analysed and used as a quality improvement tool.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- layout and design
- attention to detail
- consultation and negotiation with customers

Required Knowledge

- display principles including colour, composition, layout, text and line style, appropriate scale, media, font types and sizes, legends and projectives
- use of software and hardware such as GIS, CAD, desktop publishing, desktop mapping,

- multimedia, graphic animation, plotters, printers and terminals
- Australian standards: drawing
- council policies relevant to information presentation

Evidence Guide

Overview of assessment requirements	A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.
Critical aspects of evidence to be considered	Customer requirements are met. Presentation is in line with Australian standards.
Context of assessment	On the job or in a simulated work environment.
Method of assessment	The following assessment methods are suggested: <ul style="list-style-type: none"> • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation third-party reports from experienced practitioners completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor.
Evidence required for demonstration of consistent performance	Evidence will need to be gathered over time across a range of variables.
Resource implications	Access to a workplace or simulated case study that provides resources, including: <ul style="list-style-type: none"> • relevant software and hardware such as GIS, CAD, desktop publishing, desktop mapping, spreadsheets, word processing, multimedia, graphic animation, plotters, printers and terminals

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Data formats*** may include:
- hard copy
 - digital graphic output
 - spreadsheets
 - databases
 - word processing documents
 - maps
 - sticky labels
 - desktop published documents
- Quality requirements*** may include:
- percentage rework
 - allowable time frame durations

Unit Sector(s)

Planning Units

LGAPLEM612B Protect heritage and cultural assets

Modification History

LGAPLEM612B Release 2: Layout adjusted.

LGAPLEM612B Release 1: Primary release.

Unit Descriptor

This unit covers establishing an inventory, assessing opportunities and threats and developing strategies for heritage and cultural assets.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare inventory of heritage and cultural assets	<p>1.1 <i>Heritage</i> and cultural assets within the community, and council expectations and requirements relating to them, are identified.</p> <p>1.2 The <i>significance</i> of each heritage and cultural asset is assessed according to established criteria and community expectations.</p> <p>1.3 An adequate <i>information</i> base of significant places is obtained through comprehensive field investigation and research.</p> <p>1.4 <i>Data</i> is collected accurately and objectively on heritage and cultural assets.</p> <p>1.5 A comprehensive inventory of heritage and cultural assets is prepared with full and detailed descriptions of history and significance.</p>
2 Assess threats and opportunities for the protection of heritage and cultural assets	<p>2.1 <i>Threats</i> and opportunities are identified to ensure all factors are fully assessed.</p> <p>2.2 Based on input from council and the community, criteria are established to enable threats and opportunities to be prioritised.</p>
3 Identify and develop strategies for the protection of heritage and cultural assets	<p>3.1 <i>Criteria</i> are established to identify priorities.</p> <p>3.2 Consultation with the community and property owners is undertaken to seek views on the conservation action required to protect the significant attributes of the area.</p> <p>3.3 A framework for the legal protection of heritage and cultural assets is established through existing legislation.</p> <p>3.4 Practical and appropriate strategies to conserve heritage and cultural assets are determined.</p> <p>3.5 The effectiveness of strategies is assessed through a comparison with methods used elsewhere.</p> <p>3.6 The policy elements of the proposed heritage program are determined.</p> <p>3.7 Innovative approaches are developed to protect heritage and cultural assets in response to the local community need.</p>
4 Implement strategies for the protection of heritage and cultural assets	<p>4.1 The study and program are adopted by the local authority.</p> <p>4.2 Consultation is undertaken with the community and property owners about the study and proposed heritage program.</p> <p>4.3 Financial resources are identified and procured within budget cycles to support the achievement of required</p>

ELEMENT**PERFORMANCE CRITERIA**

- outcomes.
- 4.4 Personnel are identified, trained and assigned to tasks so that requirements for skills and knowledge are met.
- 4.5 Physical facilities and equipment are identified and procured within budget cycles to support the achievement of required outcomes.
- 4.6 Community education and *information* materials are prepared and distributed to ensure ongoing support for the strategy.
- 4.7 The strategy is incorporated into council policies and procedures and relevant legislation.
- 4.8 A timetable for implementation is established and priorities are set.
- 5 **Monitor and review the effectiveness of strategies to protect heritage and cultural assets**
- 5.1 Further research is undertaken on *places* listed as being of local significance in the study.
- 5.2 Additional plans of significance are identified and reviewed.
- 5.3 An annual heritage report is prepared if required.
- 5.4 Information received from monitoring and review is used to develop new strategies that are based on accumulated knowledge and experience.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- research
- collation of information from local, national and international sources
- evaluation methodologies
- consultation with a range of community and government agencies
- strategic planning
- budgeting and lifecycle costings
- community education strategies
- project management

Required Knowledge

- heritage assets
- cultural assets
- asset classification

- council structures and services
- town planning
- community needs and expectations
- regulations, standards and policies
- community information

Evidence Guide

Overview of assessment requirements	A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.
Critical aspects of evidence to be considered	The demonstrated ability to: <ul style="list-style-type: none">• identify and protect heritage and cultural assets• identify and implement strategies to protect heritage and cultural assets• put in place monitoring processes
Context of assessment	Assessment of performance requirements in this unit should be undertaken within the context of the local government framework. Competency is demonstrated by performance of all stated criteria, including the Range of Variables applicable to the workplace environment.
Method of assessment	The following assessment methods are suggested: <ul style="list-style-type: none">• observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies• written and/or oral questioning to assess knowledge and understanding• completion of workplace documentation• third-party reports from experienced practitioners• completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor
Evidence required for demonstration of consistent performance	Evidence should be gathered over a period of time in a range of actual or simulated management environments.

- Resource implications** Access to a workplace or simulated case study that provides the following resources:
- relevant data such as survey information
 - historical research
 - existing reports
 - studies and texts
 - financial and budget information
 - real or simulated consultation process
 - copies of relevant regulations, standards and policies

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Heritage*** may include:
- cultural and environmental issues
 - national and local area significance
 - danger component of heritage element or structure

- Significance*** may be:
- aesthetic, historical, scientific and social aspects
 - community expectations.
 - national
 - state
 - regional
 - local
 - contributory

- Data*** includes:
- survey information
 - historical research
 - existing reports
 - studies and texts

- Information*** may include:
- written and oral records
 - reports
 - instructions
 - directions from supervisor and management
 - formal and informal interviews
 - team meetings
 - reports from other services, agencies, specialists and experts
 - media

- Threats*** may include:
- political emphasis

Criteria may include:

- reductions in maintenance
- lack of planning
- other authorities' planning
- competing interests
- community attitudes
- community preferences
- budget constraints
- legislative provisions
- resources
- time frames
- age
- outstanding craftsmanship
- architectural style
- construction technology
- an association with important events or figures
- building type
- rarity
- technical or creative achievement
- representing a way of life
- artistic
- religious or cultural associations

Places of significance
may include:

- buildings
- structures
- plantings
- subsurface remains

Unit Sector(s)

Land Management

LGAWORK212A Perform field support duties in a roadwork environment

Modification History

LGAWORK212A Release 2: Layout adjusted.

LGAWORK212A Release 1: Primary release.

Unit Descriptor

This unit covers the competencies required to undertake relevant field support duties in the construction and maintenance of roads within Council areas. The unit looks at establishing the facilities required for road works, the preparation of surfaces and materials necessary for road construction and maintenance and the use of appropriate signage at the work site.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations that provide the boundaries for the operation of councils is essential. The ability to use appropriate materials, construction methods and processes and adhere to relevant standards must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the

Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Establish site facilities for road maintenance and construction	1.1 Work is planned and programmed to be undertaken in accordance with drawings, specifications and other documentation. 1.2 Work site is prepared and maintained in a safe condition in accordance with OHS requirements and regulations of other accredited authorities. 1.3 Traffic control is planned at job site and signed in accordance with relevant Australian Standards. 1.4 Underground and overhead obstructions and other utility services are identified. 1.5 Appropriate <i>signage</i> is selected, established and maintained at work site.
2 Construct appropriate pits and manholes	2.1 Plant, equipment, tools and materials to construct manholes and pits are selected. 2.2 Pits and manholes are constructed according to council requirements.
3 Construct roads and pavements	3.1 Site is set out, cleared and prepared 3.2 <i>Earthworks</i> are undertaken and the sub-grade prepared. 3.3 Construction materials are spread and compacted using appropriate <i>plant, equipment, materials</i> and construction. 3.4 Pavement surface for construction of wearing <i>surface</i> using either a bitumen seal or asphalt surface. 3.5 Pavement markings are applied and signs, safety rails and markers are erected as specified.
4 Maintain roads and pavements	4.1 Surface is set out and prepared for resealing/patching or other maintenance activities. 4.2 Levelling tasks are carried out where necessary using appropriate plant and equipment. 4.3 Materials used to maintain the pavement are prepared correctly using appropriate tools and equipment. 4.4 Repairs on road pavement, kerb and channel, potholes, sealing and asphalt overlays are made using appropriate tools, plant and equipment. 4.5 Subsurface and surface open drains are maintained,

ELEMENT	PERFORMANCE CRITERIA
	repaired and cleared where necessary.
	4.6 Trees and shrubs are trimmed or removed and weeds are controlled according to council requirements.
	4.7 Verges are mown by tractor signs in relation to their meaning, positioning and material.
5 Maintain records for road construction and maintenance	5.1 Information is recorded in accordance with council and legislative requirements.
	5.2 Details are recorded clearly, accurately and legibly.
	5.3 <i>Records</i> are secured, accessible and up-to-date.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- written and verbal communication skills
- reading and interpreting plans and specifications, plant and equipment capabilities and estimation of plant output
- civil works construction techniques and methods
- calculation of quantities
- trade specific skills related to work undertaken
- material testing

Required Knowledge

- OH&S requirements
- construction and maintenance practices
- materials technology associate with roads construction and maintenance
- work scheduling, inspection, testing and monitoring
- work site traffic management
- monitoring and testing methods and procedures

Evidence Guide

Overview of assessment requirements A person who demonstrates competency in this unit will be able to perform the outcomes described in the elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example,

the knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

Critical aspects of evidence to be considered

Demonstrated ability to use appropriate materials, construction methods and processes for the construction and maintenance of roads.

Demonstrated ability to adhere to plans and specifications.

Demonstrated ability to adhere to relevant occupational health and safety practices on site.

Demonstrated ability to adhere to Australian standards, codes of practice and advisory standards.

Context of assessment

Competency is demonstrated by performance of all stated criteria, including paying particular attention to the critical aspects and the knowledge and skills elaborated in the Evidence Guide, and within the scope as defined in the Range Statement.

Assessment must take account of the endorsed Assessment Guidelines in the Local Government Training Package.

Assessment of the performance requirements in this unit should be undertaken in an actual workplace or simulated environment.

Assessment should reinforce the integration of the key competencies for the particular AQF level. Refer to the Key Competency levels at the end of this unit.

Relationship to other units (prerequisite or co-requisite units)

To enable holistic assessment this unit may be assessed with other units that form part of the job role.

Method of assessment

The following assessment methods are suggested:

- observation of the learner performing a range of workplace tasks over sufficient time to demonstrate his/her handling of a range of contingencies
- written and/or oral questioning to assess knowledge and understanding
- completing workplace documentation
- third party reports from experienced practitioner
- completion of self-paced learning materials including personal reflection and feedback from trainer/coach/supervisor

Evidence required for demonstration of

Evidence should be collected over a set period of time which is sufficient to include dealings with an appropriate range and

consistent performance variety of situations.

Resource implications The learner and the trainer should have access to appropriate documentation and resources normally used in the workplace.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Signage includes:

- statutory
- directional and information
- road lines/road markings
- reflectors
- centrelines
- directional lines
- shoulder lines

Earthworks may include:

- clearing
- grading
- levelling
- excavating
- trenching

Plant and equipment may include:

- bulldozers
- excavators
- trucks
- graders
- compactors
- loaders
- skid steers
- pumps

Types of construction materials may include:

- soils (clay, sand, gravel, silt)
- crushed rock
- soil aggregates
- concrete aggregates
- filter sands and aggregates
- bitumen
- cutback bitumen
- bitumen emulsion

Types of surfaces may include:

- bitumen and emulsion seal
- unsealed

Types of records may include:

- gravel
- concrete
- segmental pavers
- asphalt
- pre-mix
- primer seal
- test reports
- job diaries
- instructions
- correspondence
- time-sheets
- accident reports
- costing sheets

Unit Sector(s)

Operational Works

LMFGG2008C Glaze reglaze residential windows and doors

Modification History

Updated format, revised Evidence Guide. Outcome equivalent.

Unit Descriptor

This unit of competency covers the skills and knowledge required to fit glass to residential windows and doors.

Application of the Unit

This unit covers work performed in workplaces involving on-site and off-site fabrication, installation and/or replacement of glass to residential windows, doors and other openings, or to other frames. Work is generally performed individually or in a team environment and requires individuals to demonstrate discretion, judgement and problem solving in the handling and installation of glass products.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | |
|---|---|---|
| 1 | Identify work requirements | 1.1 Work requirements for the <i>type of glass</i> to be used and the <i>method</i> of fixing are identified from work instructions |
| | | 1.2 Occupational health and safety (OHS) requirements for <i>glazing/re-glazing</i> of windows and doors, including <i>personal protective equipment</i> , are observed throughout the work |
| | | 1.3 The process for fitting glass to window and doorframes is identified |
| 2 | Prepare for work | 2.1 Work sequence is planned in a logical order to suit the job and in accordance with <i>workplace procedures</i> |
| | | 2.2 <i>Tools, equipment</i> and <i>materials</i> (other than glass and frames) are selected and checked prior to use to ensure they are appropriate for the work, serviceable and in a safe condition |
| | | 2.3 Type of glass to be fitted and frames are selected to <i>match job requirements</i> and glass checked for type, size and imperfections |
| | | 2.4 <i>Glass fixing method</i> is selected and frame condition is assessed to ensure suitability for glazing in accordance with customer order and Australian Standards |
| | | 2.5 Defective frames are reported for repair or replacement in accordance with workplace procedures |
| | | 2.6 Fixing and sealing materials are prepared by mixing or cutting to length, as appropriate |
| 3 | Identify site conditions and restraints | 3.1 On-site difficulties are recognised and corrective action taken in accordance with regulations and workplace requirements |
| | | 3.2 Covering material is applied, where necessary, to protect existing fixtures and fittings |
| | | 3.3 Special characteristics of the window or door which may affect the finished job are identified and corrective |

action taken

- | | | | |
|---|-----------------|-----|---|
| 4 | Perform glazing | 4.1 | Frame is prepared to receive glass by checking size against specifications, removing remains of glass and any sealants, cleaning and surface preparation, if required |
| | | 4.2 | Glass is fixed to the frame using the selected method and in accordance with recognised industry procedures and Australian Standards |
| | | 4.3 | Solvents and sealants are used in accordance with manufacturer recommendations and Australian Standards |
| | | 4.4 | Excess sealing material is removed and glass and frame cleaned after fixing |
| 5 | Complete work | 5.1 | Completed installation is checked to ensure compliance with customer requirements and specifications |
| | | 5.2 | Tools, equipment and materials are cleaned and stored following workplace procedures |
| | | 5.3 | Work area is cleaned and left in a safe condition and rubbish disposed of, as appropriate |
| | | 5.4 | Waste and scrap materials are removed for disposal or recycling, as required |
| | | 5.5 | Workplace documentation is completed in accordance with workplace requirements |

Required Skills and Knowledge

Required skills include:

- collecting, organising and understanding information related to work orders, basic plans and safety procedures
- using communication skills to the level required to confirm work requirements and specifications; communicate effectively regarding work requirements with supervisors, other workers and customers; report work outcomes and problems; and relate to people from a range of social, cultural and ethnic backgrounds, and of varying physical and mental abilities

- using literacy skills to the level required to understand information related to work orders, including common industry terminology, plans and safety procedures; prepare reports; and interpret technical information and specifications
- planning and organising activities, including the preparation and layout of the work area, and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- working with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- using mathematical ideas and techniques to correctly complete measurements, calculate work requirements, and optimise glass sizes for economical cutting and assembling of required materials
- using pre-checking and inspection techniques to plan work, and avoid re-working and wastage
- using workplace technology related to the glazing of simple window and doorframes

Required knowledge includes:

- the qualities and characteristics of glass, including hazards and handling requirements
- techniques, methods, materials and process of glazing simple/complex window and doorframes
- workplace safety system requirements related to the glazing simple/complex window and doorframes
- relevant Australian Standards
- workflow requirements in relation to fitting glass
- characteristics, purpose and operation of tools and equipment used in glazing simple/complex window and doorframes
- correct identification of equipment, processes and procedures

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently: <ul style="list-style-type: none"> • interpret work order/job instruction and locate and apply relevant information to glaze/re-glaze simple/complex windows and doors • apply safe handling requirements for equipment,

	<p>products and materials, including use of personal protective equipment</p> <ul style="list-style-type: none"> • follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • glaze or re-glaze the following: <ul style="list-style-type: none"> • timber putty faced window sashes or door panel • timber beaded sidelight, fixed panel, sliding, hinged, pivot and/or bi-fold doors • metal framed channel glazed door or window • metal framed beaded door or window • include the following for each: <ul style="list-style-type: none"> • calculate glazing clearance and cutting size • cut glass to AS/NZS 4667:2000 Quality requirements for cut-to-size and processed glass • select glazing tools, equipment, glazing sealants, vinyls and tapes • prepare working area • prepare glazing rebates and channels prior to installation • clean glass, tools, equipment and work area • calculate the cost of glass, glazing materials and labour • select re-glazing tools and equipment • hack out/remove beads and glass safely from timber windows and doors • remove and disassemble metal window sashes and doors and remove glass safely • install and/or adjust sash cords, unique, spiral or spring balances on double hung windows • work effectively with others.
Context of and specific resources for assessment	<p>The application of competency is to be assessed in the workplace or realistically simulated workplace.</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in</p>

	<p>an off-site context.</p> <p>Assessment is to comply with relevant regulatory or Australian Standard requirements.</p> <p>The following resources should be made available:</p> <ul style="list-style-type: none"> • frames • glass • fixing material • sealants • workplace operating procedures and work orders • personal protective equipment • an appropriate work area/site.
Method of assessment	<p>Assessment must satisfy the endorsed Assessment Guidelines of the LMF02 Furnishing Industry Training Package.</p> <p>Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application.</p> <p>Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</p> <p>Assessment may be in conjunction with assessment of other units of competency.</p>
Guidance information for assessment	

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Types of glass may include, but are not limited to:</i>	<ul style="list-style-type: none"> • annealed glass • toughened glass • laminated glass • wired glass • tinted and heat reflective glass • coated glass and insulated glass units • patterned glass
<i>Methods of glazing may include:</i>	<ul style="list-style-type: none"> • channel glazing • beaded glazing and double glazing
<i>Glazing/re-glazing may include:</i>	<ul style="list-style-type: none"> • the installation of glass to metal and/or timber doors, windows and other frames and re-glazing of existing windows and doors • residential glazing/re-glazing that is confined to simple doors and windows, and may include: <ul style="list-style-type: none"> • residential windows, such as fixed, sliding, casement, awning and double hung and louveres • residential doors, such as sliding, hinged, pivot and bi-fold
<i>Personal protective equipment includes:</i>	<ul style="list-style-type: none"> • that prescribed under legislation, regulation and Australian Standard policies and practices, and may include: <ul style="list-style-type: none"> • gloves • safety glasses • gauntlets • safety footwear • hard hats • aprons and overalls
<i>Workplace procedures include:</i>	<ul style="list-style-type: none"> • workplace procedures relating to the glazing of simple windows and doorframes • Australian Standards: <ul style="list-style-type: none"> • AS 1288:2006 Glass in buildings - Selection and installation • AS/NZS 2208:1996 Safety glazing materials in buildings • AS/NZS 4667:2000 Quality requirements for cut-to-size and processed glass • AS 2047:1999 Windows in buildings - Selection and installation • AS/NZS 4666:2000 Insulating glass units • equipment and material manufacturer specifications and operational procedures • on-site procedures and regulations relating to the

	<ul style="list-style-type: none"> handling and movement of glass • work instructions, including job sheets, plans, drawings and designs • safety standards, including personal protective equipment, OHS regulations and enterprise requirements
<i>Tools and equipment are to include:</i>	<ul style="list-style-type: none"> • tungsten wheel glass cutters • speed cutters • cutting lubricants • running pliers • straight edges and squares • tape measures • glass handling and lifting equipment • hack-out knives • chisels • putty knives • sprig/diamond guns • vinyl cutters and rollers • pry bars • sealant guns • blade and phillips head screwdrivers • pop rivet guns • electric and pneumatic drills • rubber mallets • claw hammers • nail punches • personal protective equipment
<i>Materials may include, but are not limited to:</i>	<ul style="list-style-type: none"> • flat glass and acrylic glazing products • plastic • aluminium • steel • solid timber • gaskets • sealants • adhesives • glazing tapes and setting blocks
<i>Matching job requirements may include:</i>	<ul style="list-style-type: none"> • customer order • existing glass type
<i>Glass fixing methods may include:</i>	<ul style="list-style-type: none"> • specification • type of glass and frame • security requirements

	<ul style="list-style-type: none">• sealing methods• Australian Standards
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Unit Sector(s)

Glass and glazing

Custom Content Section

Not applicable.

MEM05004C Perform routine oxy acetylene welding

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers preparing materials and performing routine oxy acetylene welding.
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Application of the Unit

Application of the unit	<p>This unit applies in a maintenance or manufacturing environment where the welding is not required to meet an Australian standard or equivalent. Fillet and butt welds would typically be performed on low carbon/mild steels.</p> <p>Where welding is required to meet Australian Standard 1554 General Purpose or equivalent codes, OHS regulations and/or licensing requirements, Unit MEM05022C (Perform advanced welding using oxy acetylene process) should be selected.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Refer to Application of the Unit

Pre-Requisites

Prerequisite units	

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. Location of welds is identified in accordance with standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Settings and consumables are selected.
4. Perform routine welding using <i>oxy acetylene</i>	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned in accordance with standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- preparing materials
- setting up welding equipment
- welding with oxy acetylene fuel gas
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- following oral instructions
- using measurement skills for joint preparation and routine oxy acetylene welding

Required knowledge

Look for evidence that confirms knowledge of:

- preparatory requirements
- materials and consumables properties and characteristics
- equipment and equipment settings
- fuel gas properties and applications
- post welding treatments
- weld characteristics
- any applicable industry standards, NOHSC guides, State/Territory regulatory codes of practice/standards
- safe work practices and procedures
- safe welding practices
- use and application of personal protective equipment for routine oxy acetylene welding

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

EVIDENCE GUIDE	
Guidelines for the Training Package.	
Overview of assessment	A person who demonstrates competency in this unit must be able to prepare materials and carry out routine oxy acetylene welding.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with performing routine oxy acetylene welding or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Materials	Mild and low carbon steel and cast iron
Prepared	Preheating, setting up jigs, fixtures, clamps, joint preparation
Equipment	Hoses, blowpipes, regulators
Consumables	Filler rods, fluxes
Oxy acetylene	The term 'oxy-acetylene' is used here to describe a range of fuel gases, including acetylene, LPG, hydrogen etc.
Cleaned	Fluxes

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Fabrication
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MEM05006C Perform brazing and or silver soldering

Modification History

Corrections to descriptor and range to clarify inclusion of 'braze welding'.

Unit Descriptor

Unit descriptor	This unit covers performing brazing (including braze welding) and silver soldering. It includes the preparation of materials and equipment and the inspection of the completed work.
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Application of the Unit

Application of the unit	<p>This unit applies to silver soldering and brazing using all grades of silver solder and braze. It also includes soldering of copper and refrigeration work. Work includes the preparation of materials and equipment and the inspection of the completed work.</p> <p>Work is undertaken in a production or maintenance environment using predetermined standards of quality, safety and work procedures.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare materials and equipment	<p>1.1. Job requirements are determined from specifications and/ or instructions.</p> <p>1.2. Materials are correctly prepared using appropriate tools and techniques.</p> <p>1.3. Materials are correctly assembled/aligned to meet specifications as required.</p> <p>1.4. Distortion prevention measures are identified and appropriate action is taken as required.</p> <p>1.5. Heating equipment is assembled and set up safely and correctly in accordance with standard operating procedures.</p> <p>1.6. Correct and appropriate consumables are selected and prepared.</p> <p>1.7. Test run is undertaken and verified as required.</p>
2. Braze and/or silver	2.1. The correct process is selected to meet specifications.

ELEMENT	PERFORMANCE CRITERIA
solder	2.2. Materials are preheated as required. 2.3. Consumables are applied using correct techniques. 2.4. Jointing material is applied correctly and in appropriate quantities to meet job/specifications. 2.5. Material temperature is annealed using correct and appropriate techniques.
3. Inspect joints	3.1. Excess jointing materials are removed using correct and appropriate techniques. 3.2. Inspection of joints is undertaken to standard operating procedures. 3.3. Inspection results are reported/recorded using standard operating procedures as required.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- preparing materials
- performing brazing, braze welding, silver soldering
- undertaking visual inspection
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- following oral instructions

Required knowledge

Look for evidence that confirms knowledge of:

- the reasons for selecting specific methods of assembly/alignment
- the procedures for minimising distortion of the materials being brazed/braze welded/silver soldered
- the procedures for assembling and setting up the specific heating equipment
- the reasons for selecting specific heating equipment
- the reasons for selecting specific consumables
- conducting test runs

REQUIRED SKILLS AND KNOWLEDGE

- typical applications of brazing/braze welding and silver soldering processes
- the procedures and precautions for preheating the materials to be joined
- the effects of the use of inappropriate techniques on the performance of the jointed materials
- the effect of inappropriate quantities of jointing material on the performance of the jointed materials
- the procedures for normalising the temperature of jointed materials
- the consequences of using inappropriate techniques to normalise the temperature of the joint
- the procedures for removing excess jointing material
- the procedures for inspecting brazed/braze welded/silver soldered joints
- use and application of personal protective equipment for silver soldering and brazing/braze welding
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to perform brazing (including braze welding) and silver soldering.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, i.e. the candidate is not in productive work, then appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the

EVIDENCE GUIDE	
	<p>candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with brazing (including braze welding) and/or silver soldering or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Materials	Ferrous and non-ferrous
Heating	Oxy acetylene and fuel gas, cylinders, connections, hoses, tips and nozzles
Consumables	Fluxes (resin or powder), all types of silver solder and brazing grades, etc.

RANGE STATEMENT

Process	Brazing, braze welding and silver soldering
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Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Fabrication
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MEM05049B Perform routine gas tungsten arc welding

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers preparing the materials and carrying out routine gas tungsten arc welding (GTAW).
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Application of the Unit

Application of the unit	<p>This unit applies in a maintenance or manufacturing environment where the weld quality is not required to meet an Australian Standard. Fillet and butt welds would typically be performed on low carbon/mild steels and aluminium.</p> <p>Where welding is required to meet Australian Standard 1554 General Purpose or equivalent codes, occupational health and safety regulations and/or licensing requirements, Unit MEM05019D (Weld using gas tungsten arc welding process) should be selected.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Refer to Application of the Unit

Pre-Requisites

Prerequisite units	

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. The locations of welds are identified in accordance with standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Settings and consumables are selected to suit application.
4. Perform routine welding using GTAW	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned to standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- preparing materials
- setting up welding equipment
- welding with GTAW
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- using measurement skills for joint preparation and routine GTAW

Required knowledge

Look for evidence that confirms knowledge of:

- preparatory requirements
- properties and characteristics of materials and consumables
- equipment and equipment settings
- fuel gas properties and applications
- post welding treatments
- weld characteristics
- safe welding practices
- use and application of personal protective equipment for routine GTAW

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to perform routine gas tungsten arc welding (GTAW).

EVIDENCE GUIDE	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with carrying out routine gas tungsten arc welding or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Materials	Mild and low carbon steel
Prepared	Preheating, setting up jigs, fixtures, clamps, joint preparation
Equipment	Hoses, welding leads and gas shrouds, electrodes, gas regulator, liners, contact tips
Consumables	Tungsten electrodes, filler wire, shielding gas
Cleaned	Slag, spatter

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Fabrication
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MEM05050B Perform routine gas metal arc welding

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers preparing materials and routine gas metal arc welding (GMAW).
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Application of the Unit

Application of the unit	<p>This unit applies in a maintenance or manufacturing environment where the weld quality is not required to meet an Australian Standard or equivalent. Fillet and butt welds would typically be performed on low carbon/mild steels.</p> <p>Where welding is required to meet Australian Standard 1554 General Purpose or equivalent codes, occupational health and safety regulations and/or licensing requirements, Unit MEM05017D (Weld using gas metal arc welding process) should be selected.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Refer to Application of the Unit

Pre-Requisites

Prerequisite units		

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. Locations of welds are identified in according to standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Settings and consumables are selected to suit application.
4. Perform routine welding using GMAW	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned to standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- preparing materials
- setting up welding equipment
- welding with GMAW
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- following oral instruction
- using measurement skills relating to joint preparation and routine GMAW

Required knowledge

Look for evidence that confirms knowledge of:

- different current and voltage settings, gas flow rates wire diameters, wire feed speed and other variables to suit typical situations.
- material and equipment preparation
- properties and characteristics of materials and consumables
- equipment and equipment settings
- fuel gas properties and applications
- post-welding treatments
- weld characteristics
- safe welding practices
- use and application of personal protective equipment for routine GMAW

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must

EVIDENCE GUIDE	
	be able to perform routine gas metal arc welding (GMAW).
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with preparing the materials and carrying out routine gas metal arc welding or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Materials	Mild and low carbon steel
Prepared	Preheating, setting up jigs, fixtures, clamps, joint preparation
Equipment	Hoses, welding leads, gas shrouds, gas regulators, liners, contact tips
Consumables	Filler wire, shielding gas
Cleaned	Slag and spatter

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Fabrication
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MEM18001C Use hand tools

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers using a range of hand tools for a variety of general engineering applications.
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Application of the Unit

Application of the unit	<p>Applications may include hand tools used for adjusting, dismantling, assembling and finishing of items or components, and the finishing, cutting, scraping of metallic and non-metallic material to size and shape. This includes simple tapping and threading and routine maintenance of hand tools.</p> <p>This unit should not be selected if the hand tool is dedicated to a single operation or machine and if only a machine specific/customised tool is used.</p> <p>When using hand held power tools or power tools used for hand held operations, refer to Unit MEM18002B (Use power tools/hand held operations).</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Use hand tools	<p>1.1. Hand tools are selected appropriate to the task requirements.</p> <p>1.2. Hand tools are used to produce desired outcomes to job specifications which may include finish, tension, size or shape.</p> <p>1.3. All safety requirements are adhered to before, during and after use.</p> <p>1.4. Unsafe or faulty tools are identified and marked for repair according to designated procedures before, during and after use.</p> <p>1.5. Routine maintenance of tools, including hand sharpening is undertaken according to standard</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>operational procedures, principles and techniques.</p> <p>1.6. Hand tools are stored safely in appropriate location according to standard operational procedures and manufacturers' recommendations.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- reading and following information on standard operating procedures
- following verbal instructions
- selecting hand tools appropriate to the task
- using hand tools safely
- identifying hand tool defects and marking for repair
- maintaining/sharpening hand tools using appropriate techniques
- storing hand tools in accordance with manufacturers'/standard operating procedures

Required knowledge

Look for evidence that confirms knowledge of:

- applications of different hand tools in a general engineering context
- common faults and/or defects in hand tools
- procedures for marking unsafe or faulty tools for repair
- routine maintenance requirements for a range of hand tools
- storage location and procedures for a range of hand tools
- hazards and control measures associated with using hand tools
- use and application of personal protective equipment
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<p>A person who demonstrates competency in this unit must be able to use hand tools for a range of general engineering applications.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with using hand tools or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Hand tools	Hacksaws, hammers, punches, screwdrivers, sockets, wrenches, scrapers, chisels, gouges, wood planes and files of all cross-sectional shapes and types
Job specifications	Finish, tension, size or shape etc.
Routine maintenance	Cleaning, lubricating, tightening, simple tool repairs, hand sharpening and adjustments using engineering principles, tools, equipment and procedures

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Maintenance and diagnostics
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MEM18011C Shut down and isolate machines/equipment

Modification History

Single band identifier removed to clarify dual status.

Unit Descriptor

Unit descriptor	This unit covers isolating and shutting down machines and equipment.
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Application of the Unit

Application of the unit	<p>This unit applies to situations that require extensive system knowledge that exclude the straightforward starting/stopping of machinery/equipment through the use of simple switching, including use of emergency switches. Shut-down/isolation is undertaken autonomously or as part of teamwork.</p> <p>Band:</p> <p>This unit has dual status and is to be regarded as both a specialisation band A unit and Specialisation band B unit for progression to C7 (AQF level IV).</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Shut down machine/equipment	<p>1.1. Machine/equipment operational function is determined and understood.</p> <p>1.2. Shut-down sequence is undertaken safely and to standard operating procedures.</p> <p>1.3. Machine/equipment is depressurised/emptied/de-energised/bled to standard operating procedures.</p> <p>1.4. Safe shut-down of machine/equipment is verified.</p> <p>1.5. Safety/security lock-off devices and signage are installed to standard operating procedures.</p> <p>1.6. Machine/equipment is left in clean and safe state.</p>
2. Isolate machine/equipment	<p>2.1. Machine/equipment operational function is determined and understood.</p> <p>2.2. Isolation methods and points are recognised and identified.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.3. Isolation is undertaken safely and to standard operating procedures. 2.4. Safe isolation of machine/equipment is verified. 2.5. Safety/security lock-off devices and signage are installed to standard operating procedure. 2.6. Machine/equipment is left in clean and safe state.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- reading, interpreting and following information on written job instructions, specifications and other applicable reference documents
- checking and clarifying task-related information
- entering information onto proformas and standard workplace forms
- shutting down machine/equipment
- purging/de-energising equipment
- installing safety/security lock-off devices and signage\

Required knowledge

Look for evidence that confirms knowledge of:

- the operational function of the machine/equipment
- the shut-down sequence
- the procedures for shutting down and isolating the machine/equipment
- safety precautions for shutting down and isolating the machine/equipment
- procedures for purging/de-energising the machine/equipment and reasons for doing so
- procedures for verifying machine/equipment shut-down and isolation and reasons for verifying
- the safety/security lock-off devices and signage to be installed
- the reasons and procedures for installing lock-off devices and signage
- the reasons for ensuring the machine/equipment is left in a clean, safe state
- hazards and control measures
- use and application of personal protective equipment

REQUIRED SKILLS AND KNOWLEDGE

- | |
|--|
| <ul style="list-style-type: none"> safe work practices and procedures |
|--|

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to shut down and isolate machines/equipment.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with shutting down and isolating machines/equipment or other units requiring the exercise of the skills and knowledge covered by this unit.

Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate

EVIDENCE GUIDE	
	must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Shut down/isolate	Shut down/isolation means and includes isolation of mechanical, electrical drives, pipework (pressure) rotating equipment etc. utilising electrical lock-off isolators, mechanical and power driven valves etc. in accordance with standard operating instructions. Relevant regulations, Australian standards and legislative requirements governing isolation and shut-down must be complied with
Machine/equipment	Manual, semi automatic and automatic machines of a stand-alone, continuous production or process nature.

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Maintenance and diagnostics
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MSACMT630A Optimise cost of product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to take a global view of the costs of a product and determines methods of reducing costs overall.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a product is selected and analysed by its cost components to determine the best method of lowering the cost overall. This unit differs from <i>MSACMT631A Undertake value analysis of product costs in terms of customer requirements</i> in that it looks at all costs and takes a holistic approach to the cost of the product.</p> <p>This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information. Problem solving, initiative and enterprise, and planning and organising are required to calculate cost components and determine cost optimisation strategies. This unit also requires aspects of self management and learning to ensure feedback and new learning is integrated into costing methods.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	<i>MSACMT631A</i>	<i>Undertake value analysis of product costs in terms of customer requirements</i>
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse total cost components of product	1.1. Identify all cost components of product 1.2. Allocate cost components to major categories such as overhead, depreciation, energy, consumables and labour 1.3. Distinguish between costs which directly deliver customer features/benefits and <i>waste</i>
2. Optimise costs	2.1. Analyse causes of costs which lead to customer features/benefit 2.2. Determine methods of increasing the customer benefit/cost ratio 2.3. Analyse causes of waste costs 2.4. Determine methods of reducing/eliminating waste costs 2.5. Analyse interactions between cost components 2.6. Check that one method of reducing costs does

ELEMENT	PERFORMANCE CRITERIA
	<p>not cause an increase in another cost/reduction in consumer benefit</p> <p>2.7. Check that cost reduction plans do not reduce required levels of regulatory compliance or Occupational Health and Safety (OHS)</p>
3. Implement cost optimisation	<p>3.1. Develop cost optimisation plans</p> <p>3.2. Negotiate with relevant people to agree on implementation plans</p> <p>3.3. Take actions to implement the cost optimisation</p> <p>3.4. Monitor the implementation of the cost optimisation</p> <p>3.5. Make adjustments to the plan as required</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- calculation
- analysis
- problem solving
- planning

Required knowledge

- cost components of product
- major costs which are controllable (and how to control them)
- types of waste
- interrelationship of cost components and costs and benefits

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.

EVIDENCE GUIDE	
Overview of assessment requirements	The person will select a product to analyse and determine cost components. Costs will be identified as waste or otherwise as an aid to determining their treatment. The cost reduction plans will optimise the cost of the product overall in terms of benefit delivered.
What are the specific resource requirements for this unit?	Access to a workplace implementing competitive manufacturing strategies. No other specific resources are required.
In what context should assessment occur?	Assessment will need to occur in a workplace.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit may be assessed concurrently with appropriate units on continuous improvement/kaizen.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	Evidence from a single optimisation may be adequate, although generally analyses of a few products with different cost structures or customer benefit structures would be required.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Waste

Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product. Within manufacturing, categories of waste include:

- excess production and early production
- delays
- movement and transport
- poor process design
- inventory
- inefficient performance of a process
- making defective items.

Waste for this unit may include activities which do not yield any benefit to the organisation or any benefit to the organisations customers.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT631A Undertake value analysis of product costs in terms of customer requirements

Modification History

Not applicable.

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit covers the knowledge and skills required by an employee who is required to analyse products and processes to determine the factors that most impact on meeting customer requirements. The analysis is in terms of cost factors and include options for improving cost efficiency. The unit also includes implementing identified changes that increase cost efficiency. The unit may be applied individually or in a team environment.</p> <p>In this unit an employee uses an analysis of the benefits/features which a customer perceives to be in a product/products as a basis for determining waste and so reducing waste.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>In a typical scenario, an employee will choose a product, analyse the features/benefits obtained by customers from this product and the cost components relating to those benefits. From this waste will be determined and actions taken to reduce waste.</p> <p>This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information. Problem solving, initiative and enterprise, and planning and organising are required to determine cost efficiencies. This unit also requires aspects of self management and learning to ensure feedback and new learning is integrated into costing methods.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	MSACMT230A	Apply cost factors to work practices
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse customer benefits and determine waste	1.1. Determine features/benefits perceived by customer in product 1.2. Analyse cost components and determine those which deliver customer features/benefits and those which don't 1.3. Analyse waste cost components 1.4. Determine alternative ways of reducing waste costs 1.5. Select actions which maximise customer benefits and minimise costs
2. Analyse production performance variance	2.1. Analyse required performance to meet customer <i>pull</i>

ELEMENT	PERFORMANCE CRITERIA
	2.2. Determine actual <i>cycle time</i> /s and variability of cycle time 2.3. Analyse cause of waste in throughput 2.4. Analyse costs and determine methods of reducing costs/waste 2.5. Take actions required to achieve cost/waste reduction/s

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- calculation
- communication
- problem solving
- analysis
- numeracy
- literacy
- planning and organising

Required knowledge

- customer benefits from products
- performance and cycle times for products made
- major costs which are controllable (and how to control them)
- types of waste (muda)
- methods of reducing waste (muda)
- methods of reducing cycle time
- desirability of improving performance and methods of reducing cycle time

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge,

EVIDENCE GUIDE

the range statement and the assessment guidelines for this training package.

Overview of assessment requirements	The employee will select a product/range of products to analyse and determine waste in terms of any cost which does not contribute directly to an identified customer benefit/feature and then proceed to determine and implement methods of reducing this waste.
What are the specific resource requirements for this unit?	Access to a workplace implementing competitive manufacturing strategies. No other specific resources are required.
In what context should assessment occur?	Assessment will need to occur in a workplace.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit may be assessed concurrently with appropriate units on continuous improvement/kaizen.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	Evidence should be available from a number of minor changes or from a single large change which had multiple facets and which was implemented over a period of months.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Waste	<p>Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product.</p> <p>Within manufacturing, categories of waste include:</p> <ul style="list-style-type: none"> • excess production and early production • delays • movement and transport • poor process design • inventory • inefficient performance of a process • making defective items. <p>Waste for this unit may include activities which do not yield any benefit to the organisation or any benefit to the organisations customers.</p>
Performance	Performance may be thought of as the rate of output of the plant compared to the rate required to meet demand.
Cycle time	Cycle time is the normal time to complete an operation on a product.
Pull	Pull is the concept of producing to demand, rather than for stock or some forecast.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT671A Develop and manage sustainable environmental practices

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit covers the knowledge and skills needed to identify opportunities for and make improvements in sustainable environmental practices in production, maintenance and logistics. Areas covered include efficient use of raw materials, management of waste, electricity conservation, heat conservation and management, water management, environment protection and environment obligations of enterprises.</p>
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Application of the Unit

Application of the unit	<p>This is the highest level sustainable environmental practices unit in the CM. In a typical scenario, there is a need to reduce <i>waste</i> in the <i>value chain</i>. Part of this is the cost of <i>environmental resources</i> to the process. Some of this is <i>necessary waste</i> but a large part of environmental resource use may be <i>unnecessary waste</i> and so should be totally eliminated. In order to make these savings, there is a need to analyse environmental resource use and cost in all its forms and then develop and implement plans for the more efficient use of energy.</p> <p>This unit primarily requires the application of communication and problem solving skills associated with collecting and analysing information. An ability to analyse resource use of technology or processes will be applied. Initiative and enterprise, and planning and organising are also required to develop plans for efficient resource use. This unit also requires aspects of self management and learning to ensure feedback and new learning is integrated into the development of</p>
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	processes.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse resource use	1.1. Identify all resource consuming processes 1.2. Determine quantity and nature of resource consumed 1.3. Analyse resource flow through different parts of the process
2. Develop resource conservation plans	2.1. Determine the efficiency of use/conversion of resources 2.2. Determine causes of low efficiency of use

ELEMENT	PERFORMANCE CRITERIA
	2.3. Develop plans for increasing the efficiency of resource use 2.4. Check resource use plans comply with regulations/licensing requirements 2.5. Determine benefit/cost of plans
3. Investigate alternative sources of resource	3.1. Determine the function of the resource used 3.2. Develop a specification for function 3.3. Identify a range of sources for meeting that function 3.4. Determine benefit/cost for alternative resource sources
4. Develop plans for more efficient resource use	4.1. Compare benefit/costs for different alternatives developed 4.2. Rank proposals based on benefit/cost compare to limited resources 4.3. Check proposals meet regulatory requirements 4.4. Recommend proposals for improving resource efficiency
5. Implement selected plans	5.1. Liaise with relevant people to implement resource efficiency plans 5.2. Follow through to ensure implementation occurs 5.3. Monitor implementation and make adjustments as required 5.4. Check new resource usage to ensure improvements have occurred

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analysis
- mathematics
- communication
- problem solving
- data gathering.

REQUIRED SKILLS AND KNOWLEDGE
<ul style="list-style-type: none"> planning and organising
Required knowledge
<ul style="list-style-type: none"> the '3Rs' - reduce, re-use, recycle regulatory/licensing requirements types and sources of resources methods of analysing resource efficiency for different resources alternative resources/alternative ways of achieving the same function principles of resource efficiency relevant regulatory/legislative requirements process needs for resources

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.	
Overview of assessment requirements	The person will be able to analyse the resource use of any/all part/s of the process and determine if there are more efficient/cheaper ways of achieving the same result.
What are the specific resource requirements for this unit?	Access to an organisation seeking to improve its resource usage.
In what context should assessment occur?	Assessment needs to be conducted in an organisation where resource use is a significant cost component.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit is related to: <ul style="list-style-type: none"> <i>MSACMT271A Use sustainable environmental practices</i> - which covers the individual application level, and <i>MSACMT670A Develop and manage sustainable energy practices</i> - which covers energy specific aspects.
What method of assessment should apply?	Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment. Assessors should gather sufficient, fair, valid, reliable,

EVIDENCE GUIDE	
	<p>authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	If evidence is from a major project to improve resource efficiency, then it may provide sufficient evidence. If evidence is from a number of minor improvements to resource use then a range of such improvements will be needed to provide sufficient evidence.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Resources	Resources includes all raw materials and components as well as cooling water, process water, cleaning water, fuels, lubricants and other materials used in/required by the process.
Waste	<p>Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product.</p> <p>Within manufacturing, categories of waste include:</p> <ul style="list-style-type: none"> • excess production and early production • delays

RANGE STATEMENT	
	<ul style="list-style-type: none"> • movement and transport • poor process design • inventory • inefficient performance of a process • making defective items. <p>Waste for this unit may include activities which do not yield any benefit to the organisation or any benefit to the organisations customers.</p>
Necessary waste	Necessary waste is any activity or cost which does not contribute directly to customer benefit/feature in the product, and which cannot be avoided (e.g. regulatory compliance and fixed costs). Necessary waste cannot be eliminated but should be managed.
Unnecessary waste	Unnecessary waste is any activity or cost which does not contribute directly to customer benefit/features in the product and can be avoided. Unnecessary waste should be eliminated as quickly as practical.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSAPMOPS404A Co-ordinate maintenance

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit applies to employees who coordinate maintenance of a manufacturing facility. It applies to all sectors of the industry.

This competency is typically performed by experienced technicians, supervisors, maintenance coordinators or team leaders, working either independently or as part of a team.

Application of the Unit

Application of this unit

This competency applies to supervisors and technicians who are required to apply knowledge of equipment operating principles, service requirements and workplace production operations to the coordination of maintenance activities. The key factors are the coordination of maintenance activities to meet the objectives of restoring the plant/equipment condition, consistent with production requirements.

The technician will:

- identify and plan maintenance work consistent with production requirements
- interpret data and information on equipment
- develop and monitor workplans for the maintenance activities
- organise materials, consumables and personnel to meet the maintenance objectives
- check tools, equipment, materials and output for conformity to job requirements
- complete logs and reports.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
ELEMENT	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the evidence guide.
1. Plan maintenance.	1.1 Develop work plans for scheduled routine maintenance activities. 1.2 Develop maintenance plans for unscheduled maintenance activities. 1.3 Source maintenance providers (internal/external). 1.4 Develop costings for maintenance work. 1.5 Implement measures to control identified hazards in line with procedures and duty of care. 1.6 Document and record required production interruptions, processes and procedures. 1.7 Obtain clearances for the maintenance work.
2. Organise maintenance.	2.1 Schedule maintenance activities, with reference to production requirements and availability of resources. 2.2 Review available maintenance expertise and arrange appropriate training and assessment where necessary.

ELEMENT	PERFORMANCE CRITERIA
ELEMENT	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the evidence guide.
	2.3 Obtain approvals for maintenance schedule as necessary to coordinate with production requirements.
3. Assemble maintenance requirements.	3.1 Determine resources required (equipment, personnel and consumables) to meet maintenance schedule. 3.2 Locate and coordinate supply of consumables, equipment and expertise to meet maintenance schedule. 3.3 Purchase equipment, consumables and expertise as required.
4. Complete maintenance.	4.1 Complete maintenance schedule. 4.2 Make appropriate readings, measurements and recordings and compare to equipment, product and other relevant specifications. 4.3 Identify areas requiring further testing and recommend appropriate procedures to supervisory staff. 4.4 Make appropriate adjustments to the maintenance schedule. 4.5 Complete records as required, noting areas where changes to equipment operation or routine maintenance are required.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Application of knowledge and understanding of equipment operation, planning and maintenance practices sufficient to plan for maintenance requirements in standard and non-standard situations and then determine appropriate action which is consistent with operation guidelines is required.

Knowledge of the enterprise's procedures and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards.

Application of the knowledge of managing risks using the hierarchy of controls applied to the process. Application of approved hazard control, safety procedures and the use of PPE in relation to handling materials, equipment operation and clean up.

Knowledge as a basis for solving processing and material problems, including:

- characteristics and capabilities of equipment, materials and processes used
- functions and troubleshooting of internal components and their problems
- routine and non-routine causes of equipment failures and the service conditions which may increase maintenance
- urgency and timeliness factors in planning maintenance activities in relation to production requirements
- proactive, predictive, preventative and reactive maintenance principles
- implications of maintenance for production and work activities
- source requirements for maintenance
- safety procedures and the use of PPE in relation to handling materials, equipment operation and cleanup
- the hierarchy of control including engineering controls.

Competence also includes the ability to:

- identify factors in production schedules, time and resource requirements (including external sources) in scheduling maintenance activities
- schedule maintenance functions in the most timely and cost effective manner
- apply relevant agreements, codes of practice or other legislative requirements
- ensure workplace is safe for maintenance activities.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical manufacturer specifications, equipment procedures, production schedules and material labels as provided to coordinators.

Writing is required to the level of completing workplace reports and proposals.

Numeracy is also required, eg analysing statistical information/historical data in the form of tables and graphs

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the ability to:

- recognise potential situations requiring action
- implement appropriate action.

Consistent performance should be demonstrated. For example, look to see that:

- early warning signs of equipment in need of attention/with potential problems are recognised
- planned work sequences are logical and conform with production schedules and work rosters
- maintenance schedules for reactive, planned and proactive maintenance are coordinated based upon the most appropriate and cost effective method to ensure equipment reliability and optimum performance
- plans are initiated and monitored, with activities modified for variations in workplace contexts and the environment, until final resolution has occurred.

Assessment method and context

It is preferred that assessment takes place in an industrial work environment.

Competence in this unit may be assessed:

- on a processing plant allowing for operation under all normal and a range of abnormal conditions
- in a situation allowing the generation of evidence of the ability to recognise, anticipate and solve problems
- using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to all work environments and sectors within the manufacturing industry. It does not include maintenance which would require trade level skills. It is not intended that this competency would cover performing maintenance which is carried on in a workshop.

This may include:

- predictive and preventative operational maintenance
- proactive maintenance
- reactive maintenance.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Tools and equipment

This competency includes use of equipment and tools such as:

- hand tools specific for the task
- testing equipment
- measuring and aligning equipment
- computer equipment
- relevant personal protective equipment.

Hazards

Typical hazards to be considered, include:

- isolations of energy sources, motive power and process materials
- manual handling of machinery components and the need for lifting devices
- hot, cold or components containing dangerous materials
- external hazards (eg traffic into a maintenance area)

Problems

Respond to/rectify 'non-routine problems' means 'apply known solutions to a variety of predictable problems'.

Typical process and product problems which may require maintenance, include:

- equipment performance outside of specification or requirements
- equipment breakdown
- equipment wear and tear.

Variables

Key variables to be monitored include:

- relationship of maintenance plan to production requirements
- costs of maintenance
- availability of materials and services
- documentation and record keeping.

Data and Records

Typical information sources, observed data and plant records may include:

- plant data
- log sheets
- production schedules
- operational and performance reports
- physical aspects such as noise, smell, feel and pressure
- condition monitoring information
- planned maintenance schedules
- standard operating procedures
- manufacturer instructions, specifications and service manuals
- machine circuit diagrams for hydraulic/pneumatic and electrical/electronic circuits
- plant description manuals.
-

Unit Sector(s)

Not applicable.

MSAPMSUP390A Use structured problem solving tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This competency covers the solving of process and other problems, beyond those associated directly with the process unit/equipment, using structured process improvement tools to identify improvements and/or solve problems.

Application of the Unit

Application of this unit

The competency is typically performed by an experienced operator, team leader or supervisor.

Generally the person would be part of a team during the solving of complex or systemic problems and would be expected to perform all parts of this unit and at all times would be liaising and cooperating with other members of the team. This includes:

- using a range of formal problem solving techniques
- identifying and clarifying the nature of the problem
- devising the best solution
- evaluating the solution
- developing an implementation plan to rectify the problem.

This unit does not cover the solving of problems undertaken as part of the operator's normal role which is covered in the relevant operation competency unit.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
ELEMENT	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Identify the problem.	1.1 Identify variances from normal operating parameters and product quality. 1.2 Define the extent, cause and nature of the problem by observation and investigation. 1.3 State and specify the problem clearly.
2. Determine fundamental cause of problem.	2.1 Identify possible causes based on experience and the use of problem solving tools/analytical techniques. 2.2 Develop possible cause statements. 2.3 Identify fundamental cause.
3. Determine corrective action.	3.1 Consider all possible options for resolution of the problem. 3.2 Consider strengths and weaknesses of possible options. 3.3 Determine corrective action to remove the problem and possible future causes. 3.4 Develop implementation plans identifying measurable objectives, resource needs and timelines in accordance with safety and operating procedures. 3.5 Develop recommendations for ongoing monitoring

ELEMENT	PERFORMANCE CRITERIA
ELEMENT	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
	and testing.
4. Communicate recommendations.	4.1 Prepare report on recommendations. 4.2 Present recommendations to appropriate personnel. 4.3 Follow up recommendations if required.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognise non-standard situations.

This unit of competency includes use of analytical techniques in problem solving such as:

- brainstorming
- fishbone diagrams/cause and effect diagrams
- process logic/process requirements
- logic tree
- similarity/difference analysis
- Pareto analysis
- force field/SWOT analysis
- flow charts
- control charts, runcharts and graphs
- scattergrams.

Action plans to solve problems are prepared including:

- priority requirements
- measurable objectives
- resource requirements
- methods for reaching objectives
- timelines
- coordination and feedback requirements
- safety requirements
- risk assessment
- environmental requirements.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical product specifications, job sheets and material labels as provided to operators.

Writing is required to the level of report writing and completing workplace forms.

Basic numeracy is also required, eg to interpret quality data and graphs.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to apply and explain:

- relevant equipment and operational processes
- enterprise policies and procedures
- enterprise goals, targets and measures
- enterprise quality, OHS and environmental requirements
- principles of decision-making strategies and techniques
- enterprise information systems and data collation
- industry codes and standards.

Consistent performance should be demonstrated. For example, look to see that:

- problems are recognised and clarified
- possible causes are identified, based on experience and use of analytical techniques in solving the problem, including:
 - identifying variations
 - identifying cause and effect
 - separating single problems from multiple problems
 - recognising recurring problems.
- fundamental cause of process or equipment faults is determined
- corrective/preventative implementation plans are developed to avoid recurrence of the problem
- implementation plan is presented to relevant personnel.

Assessment method and context

Assessment will occur on the job or in a simulated workplace.

Competence in this unit may be assessed:

- in a situation allowing the generation of evidence of the ability to recognise and respond to problems
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

The competency unit applies to a wide range of processes and equipment. The process manufacturing technical units of competency include a problem solving element where problems specific to that competency unit are to be resolved. This competency unit is where structured problem solving techniques are to be applied more broadly, or with greater depth/rigour than is implied by the problem solving element of the technical units.

In large plants or manufacturing organisations with multiple processes, it may apply to more than one process if those processes interact with each other. It applies to all operators across all functions.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Hazards

Typical hazards include leaks, spillages and equipment hazards that can occur during the walk-through of a plant.

Problems

'Anticipate and solve problems' means resolve a wide range of routine and non-routine problems, using product and process knowledge to develop solutions to problems which do not have a known solution/a solution recorded in the procedures.

Typical process and product problems may include:

- non-routine process and quality problems
- equipment selection, availability and failure
- teamwork and work allocation problems
- safety and emergency situations and incidents.
-

Unit Sector(s)

Not applicable.

MSS015002A Develop strategies for more sustainable use of resources

Modification History

Not applicable.

Unit Descriptor

This unit of competency covers identifying strategies for more sustainable uses of resources. The unit includes the identification of waste as defined in lean manufacturing (muda) as part of a strategy for achieving better sustainability outcomes in a process as well as quantifying theoretical and actual resource (including energy) consumption.

Application of the Unit

This unit applies inside organisations and their value chains and specifically applies to the use of resources as part of an overall response to improving sustainability. The unit has been developed with manufacturing operations as a focus. However, because of the range of organisations in a typical manufacturing value chain it may also be applied to other types of organisations.

The unit assumes that a decision to attempt to achieve more sustainable use of resources has already been made. The unit covers the skills needed for developing a strategic approach to resource use at the organisation or value chain level.

The unit does not cover the technical skills required to implement specific initiatives that may be identified as part of the strategic plan. However, there is a requirement to present and organise data. The complexity of this requirement will vary according to the type and scale of the organisation's processes. Where required, appropriate mathematics and statistics units should be selected from the MEM05 Metal and Engineering Training Package or other appropriate Training Package.

Where the carbon footprint (or water footprint or similar) of an enterprise or value chain is known, the unit can be applied to developing strategies for the reduction of that footprint.

It would typically be undertaken by a manager or technical specialist who had a major responsibility for sustainability as part of a broader work role, or sustainability may be their primary work responsibility.

For specific techniques covering the auditing of water, energy, emissions and transport, refer to relevant sustainability audit units.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

- | | |
|---|---|
| 1 Quantify resource consumption | 1.1 Identify all significant resources used by process |
| | 1.2 Identify consumption measurements available for each resource |
| | 1.3 Determine consumption for each resource |
| 2 Quantify resource loss | 2.1 Determine theoretical consumption of each resource |
| | 2.2 Compare theoretical consumption with actual consumption |
| | 2.3 Determine loss (emission) for each resource |
| 3 Recommend strategies for reducing waste | 3.1 Short-list high emission process steps |
| | 3.2 Analyse process to identify emission steps or locations |
| | 3.3 Determine root cause of emission |
| | 3.4 Investigate methods for reducing emission |
| | 3.5 Develop strategies and recommendations for improvement |
| 4 Prepare resources use audit report | 4.1 Identify purpose of report and key stakeholders |
| | 4.2 Compile data, implications and recommendations |
| | 4.3 Consult with stakeholders as appropriate |
| | 4.4 Draft and present report |

Required Skills and Knowledge

Required knowledge includes:

- the concept of muda. Muda is usually summarised under the headings of the ‘seven wastes’ which include:
 - overproduction
 - delay/waiting
 - transportation
 - over processing
 - excess inventory
 - unnecessary motion
 - defects and rework
- methods of material balancing
- methods of energy balancing
- methods of comparing theoretical with actual resource consumption
- methods for mapping manufacturing processes and resources consumed
- methods of measuring actual resource usage
- concept of muda and muda categories
- muda reduction methods and strategies
- AS/NZS ISO 14000 Environmental Management Standards

Required skills include:

- calculating, manipulating and interpreting numerical data, including establishing series, means and averages, absolute and proportional material and energy usage per product or process, correlations and rates of change
- analysing and conducting root cause analysis
- calculating theoretical consumption of resources as the minimum amount of resources per product or process step as defined by the customer multiplied by the rate of production or process
- calculating actual consumption of resources per unit (e.g. per product, operation, site or value chain)
- writing technical reports
- consulting with technical experts and internal and external stakeholders

Evidence Guide

Overview of assessment	A person who demonstrates competency in this unit must be able to identify and quantify resources and waste in a process, recommend strategies to reduce waste and prepare a report with recommendations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently apply the skills covered in this unit of competency in new and different situations and contexts. Critical aspects of assessment and evidence include: <ul style="list-style-type: none"> • quantifying significant resource consumption and emission using materials balancing • identifying and consulting with stakeholders • developing strategies for reducing emissions • preparing and presenting a resources use report.
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit of competency is to be assessed in the workplace or a simulated workplace environment. • Assessment should emphasise a workplace context and procedures found in the candidate's workplace. • This unit of competency may be assessed with other relevant units addressing sustainability at the enterprise level or other units requiring the exercise of the skills and knowledge covered by this unit. • The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team.
Method of assessment	<ul style="list-style-type: none"> • In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work-like environment.
Guidance information for assessment	

Range Statement

Waste	Waste in this unit is used in the broader sense of ‘muda’ as used in lean manufacturing and the competitive manufacturing units of competency developed by Manufacturing Skills Australia (MSA)
Emissions	<p>Emissions means all materials which enter the process/site but which do not leave as part of the product and so includes:</p> <ul style="list-style-type: none"> • known or able to be physically measured emissions of: <ul style="list-style-type: none"> • gases, vapours and fumes • liquids • solids • assumed emissions through material balancing • assumed emissions through energy loss, including heat, friction and other energy conversion yield losses
Theoretical consumption	Theoretical consumption of resources is the minimum amount of resources per product as defined by the customer multiplied by the rate of production
Actual consumption	Actual consumption is the amount of a resource entering the value chain
Significant resources	<p>Significant resources includes resources which are deemed to be significant because they are:</p> <ul style="list-style-type: none"> • high volume • high value • high environmental significance • important to the product or process • covered by legislation or regulation • important to the enterprise <p>It need not include resources which are incidental to the activity and which are not otherwise significant</p>

Unit Sector(s)

Sustainability

Custom Content Section

Not applicable.

MSS015003A Analyse product life cycle for sustainability

Modification History

Not applicable.

Unit Descriptor

This unit of competency covers analysing the life cycle of an existing or a proposed product to inform sustainability related decision making.

This unit does not specifically cover design for sustainability which is covered by MSS015004A Design sustainable product or process.

Application of the Unit

This unit applies to analysing all aspects of a product, including its design, production, storage and distribution, use, and end of life reuse, recycling or disposal. This analysis may be undertaken to assist in improving the sustainability of a product or process.

This unit applies inside organisations and their value chains. The unit has been developed with manufacturing operations as a focus. However, because of the range of organisations in a typical manufacturing value chain it may also be applied to other types of organisations.

It would typically be undertaken by a manager or technical specialist who had a major responsibility for sustainability as part of a broader work role, or sustainability may be their primary work responsibility. The technologist may undertake this alone or as part of a team.

The technical measurement of operational performance or measurement of emissions or other environmental impact is not covered by this unit.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

- | | |
|--|---|
| 1 Assess raw sources of material and resources | 1.1 Identify current or planned materials back to their source in the value chain
1.2 Identify possible alternative materials/sources
1.3 Assess the sustainability impacts of each material |
| 2 Assess the production process | 2.1 Identify design brief for product
2.2 Map out the current or planned process
2.3 Assess the sustainability impacts of each process
2.4 Assess the sustainability impact of each material on the process sustainability
2.5 Identify possible alternative steps or processes
2.6 Determine if alternative steps or processes maintain design brief while improving sustainability |
| 3 Assess the product life and end of life disposal | 3.1 Determine sustainability impacts from steps to final consumer
3.2 Determine sustainability impacts from likely uses and applications
3.3 Determine sustainability impacts from final use or disposal at end of life
3.4 Identify possible alternative steps to customer, use and disposal
3.5 Determine sustainability impacts from these alternatives |
| 4 Develop strategies to improve life cycle | 4.1 Identify alternative processes, logistics, usage and disposal with better sustainability impacts
4.2 Determine requirements to implement these alternatives
4.3 Determine benefit/cost for each alternative
4.4 Select preferred alternatives |
| 5 Prepare a recommendation for | 5.1 Consult with key stakeholders |

life cycle improvement

5.2 Prepare a recommendation for improving product life cycle

Required Skills and Knowledge

Required knowledge includes:

- value chain for analysed products
- sources and uses of materials
- alternative sources of materials
- production process and sustainability impacts of process
- sustainability impacts of supply chain and delivery chain
- alternative ways of delivering value to customer
- cost-benefit calculation

Required skills include:

- communicating with stakeholders
- analysing processes, logistics, material usages, costs and benefits
- consulting on existing and alternative processes and materials
- preparing recommendations

Evidence Guide

Overview of assessment	A person who demonstrates competency in this unit must be able to identify determine the life cycle of a product, including resources and materials used in production, and be able to recommend improvements in product life cycle.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently apply the skills covered in this unit of competency in new and different situations and contexts. Critical aspects of assessment and evidence include: <ul style="list-style-type: none"> • identifying materials and their source in the value chain • identifying current and alternative steps in the production process and their sustainability impact • assessing sustainability impact to end of life • suggesting sustainability improvements at each stage of life cycle • analysing re-use and recycling options.
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit of competency is to be assessed in the workplace or a simulated workplace environment. • Assessment should emphasise a workplace context and procedures found in the candidate's workplace. • This unit of competency may be assessed with other relevant units addressing sustainability at the enterprise level or other units requiring the exercise of the skills and knowledge covered by this unit. • The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team.
Method of assessment	<ul style="list-style-type: none"> • In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work-like environment.
Guidance information for assessment	

Range Statement

Materials	<p>Materials include:</p> <ul style="list-style-type: none"> • both materials directly used and also materials which comprise components which are used • materials/resources which may be consumed to make a physical product • materials which may be consumed in delivering a service (e.g. fuel, energy and other consumables)
Design brief	<p>Design brief includes the aims and objectives of the original product design, including:</p> <ul style="list-style-type: none"> • regulatory environment • material specifications • production process • estimated and actual material and energy consumption • budget • timelines • product use and disposal assumptions • market assumptions, including target groups, product image and cost
Sustainability impact	<p>The sustainability impact of a product and process may include:</p> <ul style="list-style-type: none"> • carbon footprint of product and process • current and future availability of raw materials • current and future availability of energy • waste generation and disposal • efficiency of process • the extent to which the production process and product affects the environment, including effects on: <ul style="list-style-type: none"> • climate • quality of local air and water • ecology • noise • relationship with the local and broader community, (e.g. effect of operations on aesthetic appearance, preservation of heritage, and proximity to schools and religious facilities) • extent of regulatory oversight and cost of compliance
Product life cycle	<p>Product life cycle includes:</p> <ul style="list-style-type: none"> • the entire life cycle of a product through design, manufacture, service and disposal

Final use or disposal at end of life	Final use or disposal at end of life covers decisions and actions on: <ul style="list-style-type: none">• reuse for modified or different purpose• recycling of components• disposal
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Unit Sector(s)

Sustainability

Custom Content Section

Not applicable.

MSS015011A Conduct a sustainability energy audit

Modification History

Not applicable.

Unit Descriptor

This unit of competency covers conducting an audit for the specific resource of energy in an organisation or part or all of its value chain and to prepare recommendations for a reduction of, and more efficient use of, energy.

Application of the Unit

This unit applies inside organisations and their value chains. The unit has been developed with manufacturing operations as a focus. However, because of the range of organisations in a typical manufacturing value chain it may also be applied to other types of organisations (e.g. supplier of goods or services or a customer).

The energy audit may be conducted to assist in regulatory compliance or as part of a strategy to improve the sustainability of manufacturing operations. The emphasis in the unit is on informing decision making in regards to energy use in a value chain or site. Where complex electrical and other energy analysis skills are required appropriate units should be selected from the MEM05 Metal and Engineering Training Package.

It would typically be undertaken by a manager or technical specialist who had a major responsibility for sustainability as part of a broader work role, or sustainability may be their primary work responsibility. The manager or technical specialist may undertake this alone or as part of a team.

The technical measurement of operational performance or measurement of emissions or other environmental impact is not covered by this unit. However, there is a requirement to present and organise data. The complexity of this requirement will vary according to the type and scale of the organisation's processes. Where required, appropriate mathematics and statistics units should be selected from the MEM05 Metal and Engineering Training Package or other appropriate Training Package.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

- | | |
|--|--|
| 1 Identify all sources and uses of energy in process | 1.1 Identify all sources of energy external to the site
1.2 Identify all sources of energy within the site
1.3 Identify all uses of energy by process unit
1.4 Identify energy type and intensity required by each process unit |
| 2 Calculate theoretical use of energy | 2.1 Calculate theoretical net use of energy by type and intensity for each process unit
2.2 Calculate overall energy balance for process/site
2.3 Evaluate the need for energy consumption by process and units within the process compared to alternative processes/units |
| 3 Measure actual use of energy | 3.1 Determine actual net energy use for overall process/site
3.2 Determine actual net energy use for each process unit
3.3 Calculate difference between theoretical and actual energy use by unit and overall
3.4 Identify actual energy type used by each process unit |
| 4 Develop strategies for reducing the use of energy | 4.1 Rank units by difference between theoretical and actual energy use
4.2 Rank units by actual energy use
4.3 Identify units using higher intensity energy than required
4.4 Develop strategies to reduce energy consumption |

and/or use lower intensity energy

- 5 Prepare a recommendation for an energy use reduction strategy
 - 5.1 Consult with key stakeholders
 - 5.2 Identify strategies required to meet regulatory or similar requirements
 - 5.3 Rank strategies by benefit/cost ratio
 - 5.4 Short-list preferred energy reduction strategies
 - 5.5 Prepare recommendation for improving energy usage

Required Skills and Knowledge

Required knowledge includes:

- nature of energy wastage:
 - efficiency
 - friction/fouling/scaling
 - temperature/pressure range of operation
- energy balancing techniques for process and process steps (sometimes known as heat balancing)
- methods of measuring actual process amount/flows
- waste reduction/energy efficiency strategies and methods along with costs, effectiveness and alternative strategies (e.g. efficient lighting, efficient window glass and efficient motors)
- cost-benefit analysis
- relevant legislation, regulation and protocols
- AS/NZS ISO 14000 Environmental Management Standards

Required skills include:

- mapping processes and energy flows
- interpreting schematics and drawings
- calculating, manipulating and interpreting numerical data, including establishing series, means, correlations and rates of change
- ranking energy consumption and waste based on energy balancing
- consulting with technical and operative staff on possible non-obvious energy wastes
- consulting and negotiating with stakeholders on implementation process for sustainability improvement
- preparing recommendations

Evidence Guide

Overview of assessment	A person who demonstrates competency in this unit must be able to conduct an energy audit, including calculation of theoretical and actual use of energy and preparation of recommendations for energy use reduction.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently apply the skills covered in this unit of competency in new and different situations and contexts. Critical aspects of assessment and evidence include:</p> <ul style="list-style-type: none"> • defining appropriate boundaries for the sustainability energy audit • conducting energy balance analyses for a site or value chain • identifying high energy use/waste units/areas • undertaking benefit/cost ratio analyses • ensuring improvement strategies proposed reflect stakeholder needs and regulatory environment.
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit of competency is to be assessed in the workplace or a simulated workplace environment. • Assessment should emphasise a workplace context and procedures found in the candidate's workplace. • This unit of competency may be assessed with other relevant units addressing sustainability at the enterprise level or other units requiring the exercise of the skills and knowledge covered by this unit. • The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team.
Method of assessment	<ul style="list-style-type: none"> • In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work-like environment.
Guidance information for assessment	

Range Statement

Energy/energy type	Energy/energy type includes: <ul style="list-style-type: none"> • operational heating and cooling • motive energy • lighting • waste energy
Theoretical use of energy	The amount of energy (work) required to move a mass or heat matter is a basic physics calculation. This is the theoretical use of energy. Anything used above this is waste (although in physics it may be referred to as inefficiency)
Energy intensity	Energy intensity includes: <ul style="list-style-type: none"> • required temperature, power and pressure, as relevant

Unit Sector(s)

Sustainability

Custom Content Section

Not applicable.

MSS402001A Apply competitive systems and practices

Modification History

New unit, superceding MSACMS200A Apply competitive manufacturing practices - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to implement basic improvement practices within an organisation using competitive systems and practices. The unit focuses on bringing together the basic concepts and the holistic application of these basic concepts and processes to operations. It would typically be carried out working as part of a team.

Application of the Unit

This unit applies to an individual in an organisation that has embarked on competitive systems and practices. The unit covers the skills and knowledge required to contribute to the competitive systems and practices processes and assumes that they are to be used within the scope of the individual's job and authority.

This unit requires the application of skills associated with planning and organising an individual's own role within the competitive systems and practices framework.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | |
|---|---------------------------------------|---|
| 1 | Identify own place in the value chain | <ul style="list-style-type: none"> 1.1 Identify customers relevant to own work and their needs/requirements 1.2 Identify suppliers for own work 1.3 Identify value contributions along the chain 1.4 Identify and recommend methods of increasing own contribution to the value chain |
| 2 | Improve the product and process value | <ul style="list-style-type: none"> 2.1 Identify customer features/benefits in the product and process 2.2 Identify aspects of product and process which contribute to customer features/benefits 2.3 Identify aspects of product and process which do not contribute to customer benefits/features 2.4 Recommend methods of reducing waste and increasing features/benefits |
| 3 | Use competitive systems and practices | <ul style="list-style-type: none"> 3.1 Identify competitive systems and practices used in organisation and own work area 3.2 Apply practices appropriate for the job or process 3.3 Monitor the job/process and make adjustments to improve it in accordance with procedures 3.4 Identify own skill requirements and seek skill development, if required |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- communicating with others to clarify scope of competitive systems and practices implementation and contributing suggestions for improvement
- visualising normal operational procedures in terms of flow and contribution to customer outcomes
- planning own tasks to support competitive systems and practices implementation
- implementing competitive systems and practices in own work area according to instructions
- identifying waste (muda)

Required knowledge

Required knowledge includes:

- internal and external customers and the value they derive from operations
- suppliers, their capabilities and contribution to value (this may be obtained from an existing value stream map or other enterprise documentation)
- waste (muda)
- relevant competitive systems and practices for own job and how to apply them
- factors impacting on product, operations and waste, particularly those wholly or partially under their control (and how to control them)

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	A person being assessed against this unit will work effectively in a competitive systems and practices environment, making continual positive contributions to the improvement of the business within the scope of their job.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person who demonstrates competency in this unit must be able to provide evidence of the ability to: <ul style="list-style-type: none"> • identify the scope of competitive systems and

	<p>practices implemented in their work area</p> <ul style="list-style-type: none"> • identify services and/or functions supplied by suppliers and to customers • identify own tasks and responsibilities and relate them to organisation and customer requirements • identify aspects of products and process which add to or detract from customer benefit • contribute suggestions for improvement.
Context of and specific resources for assessment	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads, and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
Method of assessment	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>

Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control And Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted</p>
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	<p>so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Customers	<p>Customers may include:</p> <ul style="list-style-type: none"> • internal or external customers and should be sufficiently close to the individual's work as to be easily identifiable • final customers used as the basis for the identification of value and waste <p>The individual does not need to interface directly with the external customer, but should be provided with sufficient information to enable them to identify customer benefits and customer features</p>
Suppliers	<p>Suppliers may be:</p> <ul style="list-style-type: none"> • internal or external suppliers and should be sufficiently close to the individual's work as to be easily identifiable <p>The operator does not need to interface directly with external suppliers, but should be provided with sufficient information to enable them to identify supplier contribution to their own work and to customer benefit</p>
Procedures	<p>Procedures may include:</p> <ul style="list-style-type: none"> • work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions and similar instructions provided for the smooth running of the organisation • good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) and government regulations <p>Procedures may be:</p> <ul style="list-style-type: none"> • written, verbal, computer-based or in some other format

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS402030A Apply cost factors to work practices

Modification History

New unit, superseding MSACMT230A Apply cost factors to work practices - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required by an individual to identify cost components in their work and to be able to determine, in general terms, the cost impacts of alternative actions.

Application of the Unit

This unit applies to an individual who is required to contribute to, and be involved in, the assessment of cost factors in their work. This may be done individually or in a team environment.

The unit covers the skills to be able to assess the relative costs of the alternatives and use this as one of the key factors in making decisions. Decisions are made within the scope of the employee's authority and according to procedures. Typical decisions include those that contribute to the efficient organisation of own work and the improvement of production time and cycle times.

This unit requires the application of skills associated with problem solving to identify cost factors and cost implications of own work and self-management to apply cost-effective practices.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised

unit of competency. text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Identify the major cost components of product or process in own work area	1.1	Identify cost components in the product or process in own work area
		1.2	Recognise the impact of current or alternative actions on costs
2	Identify constraints to cost-efficiency	2.1	Identify required production/process rate and major costs
		2.2	Identify costs factors under individual or team control
		2.3	Relate identified costs factors to impact on overall cost of production/process
		2.4	Identify cost factors that are a constraint to cost-efficiency in own work area
3	Apply cost-efficient work practices	3.1	Identify and explain to relevant people the implications of possible actions/changes to improve cost-efficiency in simple financial terms
		3.2	Identify non-financial implications of proposed changes in discussion with relevant people
		3.3	Select actions which minimise overall costs
		3.4	Monitor actions to ensure cost-efficiency in own work area is maintained

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- communicating with others to clarify cost factors and contribute suggestions for improvement
- visualising normal operational procedures in terms of flow
- distinguishing between fixed and variable costs
- identifying fixed and variable cost components relevant to own work, including where applicable:
 - power/energy
 - materials, plant and equipment
 - production or process time, including impact on salary and wages
 - office expenses
 - government taxes and charges

Required knowledge

Required knowledge includes:

- cost components of products made
- costs concepts, such as expense and income
- major cost contributors to product (e.g. energy)
- the difference between internally and externally controlled costs
- difference between overhead, labour and consumables

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • identify the scope of their own and their teams work and relate it to the overall flow of work in the organisation • express cost factors in specific terms (e.g. cost per
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	<p>item, process and task) and not just in a general manner</p> <ul style="list-style-type: none"> • identify and express costs factors in simple financial terms • use cost factors to select lower cost alternatives when making decisions.
Context of and specific resources for assessment	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
Method of assessment	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and</p>

	literacy capacity of the candidate and the work being performed.
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems
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	<p>and practices</p> <ul style="list-style-type: none"> • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Cost components	<p>Cost components include:</p> <ul style="list-style-type: none"> • fixed and variable costs, such as power/energy, materials, plant and equipment, production or process time, including impact on salary and wages • office expenses, such as telephone • government taxes and charges
Process	<p>Process may include:</p> <ul style="list-style-type: none"> • a production, maintenance, logistics, office or other support process in an organisation
Overall cost	<p>Overall cost may include:</p> <ul style="list-style-type: none"> • the assessment of negative and positive financial implications • negative long-term issues, such as occupational health and safety (OHS), environmental and regulatory issues

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS402050A Monitor process capability

Modification History

New unit, MSACMT250A Monitor process capability - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required for gathering of data and the interpretation of simple information to determine the compliance of the process and the taking of action as defined by the procedures where the information reveals the process is out of control parameters.

Application of the Unit

This unit applies to an individual in an organisation adopting specific competitive systems and practices, usually either six sigma or statistical process control/three sigma, as a means of determining and improving the capability of their process to customer requirements. The individual is involved in collecting specified data and performing specified manipulations to the data (typically by plotting on a chart or by entering into a nominated computer program). The information is typically presented to team members in terms of graphs/charts which they are expected to interpret at a basic level and then take action in accordance with procedures to restore the process to being under control parameters.

This unit requires the application of skills associated with entering and monitoring operational data and information and requires initiative, enterprise and problem solving in identifying production variations and making improvement recommendations.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

1	Collect and process data	1.1	Take specified measurements/readings, as required
		1.2	Enter data in log, computer or other record
		1.3	Manipulate and/or chart data as required by procedures
2	Identify variations that are not random and take action	2.1	Examine chart and/or reliability information
		2.2	Distinguish between random variations and those with an identifiable cause
		2.3	Take action specified in procedures when a variation with an identifiable cause occurs
3	Assist in process improvement	3.1	Collect data for process capability improvement trials
		3.2	Make recommendations for improvement
		3.3	Implement revised capability monitoring procedures

Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- reading and interpreting electronic and hard copy operating instructions and documents, including where used:
 - work instructions

- standard operating procedures
- formulas/recipes
- production and batch sheets
- temporary instructions
- other provided operating instructions
- monitoring performance data against specifications and control parameters
- examining equipment procedures, products and processes for possible causes of variations
- identifying when corrective action is required by reference to procedures

Required knowledge

Required knowledge includes:

- data collection methods for operations in work area
- data processing techniques required
- basic variability and normal distribution
- recognition of identifiable causes in accordance with procedures
- causes of different types of identifiable causes as defined by procedures
- actions to be taken for the different causes

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence should be available of data collected and processed. There may also be evidence of assignable causes recognised and action taken. There should not be evidence of assignable causes being ignored.</p> <p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • identify the scope of operations, including required performance parameters in their work area • collect, enter and process data, including normal performance and variations • read and interpret data, including identifying variation to set parameters • determine where assignable causes can be allocated to variations and take appropriate action • participate in data collection, when required, for
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	<p>process capability trials</p> <ul style="list-style-type: none"> • contribute suggestions for improvement.
Context of and specific resources for assessment	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
Method of assessment	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Competitive systems and practices</p>	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems. • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
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Six sigma	<p>Six sigma is a process improvement methodology based on statistical process control with six sigma limits which equates to 3.4 defects per million opportunities for each product or service transaction</p> <p>Six sigma is also often used as a general term covering a competitive systems and practices approach. Six sigma training typically covers several units of competency in this Training Package</p>
Three sigma	<p>Three sigma includes:</p> <ul style="list-style-type: none"> • statistical process control with three sigma limits which equates to 3 defects per thousand opportunities for each product or service transaction
Procedures	<p>Procedures may include:</p> <ul style="list-style-type: none"> • work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions and similar instructions provided for the smooth running of the plant • good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) • government regulations <p>Procedures may be:</p> <ul style="list-style-type: none"> • written, verbal, computer-based or in some other form
Random variation	<p>Random variation is the term used in statistical control to refer to those variations for which no cause can be found</p>
Identifiable cause	<p>Identifiable cause (also referred to as assignable cause or special cause) refers to:</p> <ul style="list-style-type: none"> • those variations for which a cause can be found and so the cause of the variation eliminated
Process capability	<p>Process capability means the capability of the process to deliver to customer defined requirements. Process capability includes process stability against standardised practices and documentation to eliminate variation against customer requirements</p>

Unit Sector(s)

Unit sector Competitive systems and practices

Custom Content Section

Not applicable.

MSS402051A Apply quality standards

Modification History

New unit, superseding MSACMT251A Apply quality standards - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to apply quality standards to work operations in an organisation. The unit is designed to complement competitive systems and practices units.

Application of the Unit

This unit applies to an individual who is expected to take responsibility for the quality of their own work, and to take actions specified in the procedures and within the scope of their job and authority to ensure that quality standards are met.

This unit requires the application of skills associated with interpreting and applying workplace standards and identifying and addressing problems that interfere with quality outcomes. The unit requires initiative, enterprise and self-management to ensure quality standards are achieved.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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|---|---|-----|--|
| 1 | Assess own work | 1.1 | Continuously check completed work against workplace standards relevant to the operation being undertaken |
| | | 1.2 | Demonstrate an understanding of how the work activities and completed work relate to the next production process or processes and to the final products or services concerned |
| | | 1.3 | Identify and isolate faulty components, products or processes |
| | | 1.4 | Record and/or report faults and any identified causes to the supervisor concerned, where required, in accordance with workplace procedures |
| 2 | Assess quality of received components, parts or materials | 2.1 | Continuously check received components, parts, materials, information, service or final products against workplace standards and specifications for conformance |
| | | 2.2 | Demonstrate an understanding of how the received components, parts or materials, information or service relate to the current operation and how they contribute to the final quality of the product or service |
| | | 2.3 | Identify and isolate faulty components, parts, materials or information that relate to the operator's work |
| | | 2.4 | Record and/or report faults and any identified causes in accordance with workplace procedures |
| | | 2.5 | Identify causes of any identified faults and take corrective action as specified in workplace procedures |
| 3 | Measure components, parts or materials | 3.1 | Measure materials, component parts, information, service or products, as required, using the appropriate measuring instruments in accordance with workplace procedures |

4	Record information on production indicator	4.1	Record basic information on quality and other indicators of process performance in accordance with workplace procedures
5	Investigate causes of quality deviations	5.1	Investigate and report causes of deviations from specified quality standards for components
		5.2	Recommend suitable preventative action based on workplace quality standards and the identified causes of deviations from specified quality standards of materials

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- interpreting work instructions, specifications, standards and patterns appropriate to own work
- carrying out relevant visual inspections of materials, component parts and final products
- carrying out relevant physical/chemical measurements or tests
- maintaining accurate work records in accordance with procedures
- carrying out work in accordance with occupational health and safety (OHS) policies and procedures
- meeting work specifications
- communicating effectively within defined workplace procedures
- interpreting and applying defined procedures

Required knowledge

Required knowledge includes:

- relevant quality standards, policies and procedures
- relevant production processes, materials and products
- basic characteristics of materials used in the relevant production processes
- safety and environmental aspects of relevant production processes
- relevant measurement techniques and quality checking procedures
- workplace procedures
- reporting procedures

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • interpret, relevant work instructions, standards and specifications appropriate to own work • check and measure relevant quality parameters • interpret results of quality checks in terms of specifications, patterns and work standards • take required action where standards of materials, component parts, final product or work processes are found to be unacceptable • maintain accurate records.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of

	<p>contingencies, improvement scenarios, and so on)</p> <ul style="list-style-type: none"> • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis
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	<ul style="list-style-type: none"> • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Quality parameters	<p>Quality parameters may include:</p> <ul style="list-style-type: none"> • finish • size • durability • product or process variations • materials • alignment • colour • damage and imperfections • time
Quality checks	<p>Quality checks are against set parameters for the process or product. Examples include:</p> <ul style="list-style-type: none"> • visual inspection • physical measurements • chemical tests • checks against patterns, templates and guides • processing time
Materials	<p>Materials may include:</p> <ul style="list-style-type: none"> • physical raw materials • orders, forms and other documentation • services required for undertaking an operation (e.g. power, water, compressed air and fuel)

Measure	<p>Measure includes:</p> <ul style="list-style-type: none"> those measurements which may be taken by the employee in the workplace/at their work station
Procedures	<p>Procedures may include:</p> <ul style="list-style-type: none"> work instructions standard operating procedures formulas/recipes batch sheets temporary instructions and similar instructions provided for the operation of the plant good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) government regulations <p>Procedures may be:</p> <ul style="list-style-type: none"> written, verbal, computer-based or in some other format
Indicators of production performance	<p>Indicators of production performance may include:</p> <ul style="list-style-type: none"> number of items/production rate delays and causes of delays (where known) other information as specified in the procedures
Data entry/recording	<p>Data entry/recording may include:</p> <ul style="list-style-type: none"> keyboard written (including ticks or signs) verbal
Sources of information/ documents	<p>Sources of information/documents may include:</p> <ul style="list-style-type: none"> quality and Australian standards and procedures work instructions, patterns, designs and recipes organisation work procedures manufacturer instructions for materials and equipment organisational or external personnel customer requirements
Investigate and report	<p>Investigate and report includes:</p> <ul style="list-style-type: none"> following set procedures defined for such investigations <p>Set procedures may include:</p> <ul style="list-style-type: none"> verbal instructions

	<ul style="list-style-type: none"> • documented procedures • other quality procedures as implemented within an organisation or work environment
Workplace context	<p>Workplace context includes:</p> <ul style="list-style-type: none"> • work organisation procedures and practices relating to the manufacture and quality outcomes for products • conditions of service, legislation and industrial agreements, including: <ul style="list-style-type: none"> • workplace agreements and awards • federal or state/territory legislation • standard work practice
Reporting/communication	<p>Reporting/communication may include:</p> <ul style="list-style-type: none"> • verbal and written communication in accordance with organisational policies and procedures • oral, written or visual communication and may include simple data
Being responsible for the maintenance of own work quality	<p>Being responsible for the maintenance of own work quality may include:</p> <ul style="list-style-type: none"> • contributing to the quality improvement of team or section output, where necessary, in accordance with workplace procedures • following safety, environmental, housekeeping and quality procedures as specified by materials/machine/equipment manufacturers, regulatory authorities and the organisation
Applicable regulations and legislation	<p>Applicable regulations and legislation may include:</p> <ul style="list-style-type: none"> • OHS legislation relevant to workplace activities • workers compensation legislation

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS402060A Use planning software systems in operations

Modification History

New unit, superseding MSACMT260A Use planning software systems in manufacturing -
Not equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to access planning software (often known as Enterprise resource Planning (ERP), Materials Resource Planning (MRP and MRPII), and often by a proprietary name, to make routine business decisions required of the person as a regular part of their job.

Application of the Unit

This unit applies to an individual in an organisation using a planning software system and who must interface with that system. The unit applies to both accessing information from the planning software system and using it as an aid to decision making. This unit requires the application of communication, planning, and problem solving associated with using planning software in own work.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | |
|---|--|---|
| 1 | Use interface | 1.1 Identify terminals relevant to own work station and functions |
| | | 1.2 Use keyboards, track ball/mouse and monitor and/or other peripherals to access system |
| | | 1.3 Navigate through system and screens to find program menu and data relevant to own work |
| | | 1.4 Identify and input information on own work processes at required frequency and to required detail |
| | | 1.5 Access message section and acknowledge messages |
| | | 1.6 Identify problems and make suggestions for improvements to relevance of planning software to own work |
| | | |
| 2 | Access information | 2.1 Identify work processes that require information from planning software system |
| | | 2.2 Obtain relevant data and information on current operations from the planning software system |
| | | 2.3 Identify the status of items in the value stream |
| | | 2.4 Access historical data and information |
| | | 2.5 Interpret information and identify and prioritise any actions required in response to information |
| | | |
| 3 | Take appropriate actions in accordance with procedures | 3.1 Take actions in response to information obtained from planning software |
| | | 3.2 Follow up as appropriate to ensure anticipated results have occurred |
| | | 3.3 Record adjustments and variations according to procedures |

3.4 Identify any learning needs to use planning software and seek appropriate support

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- reading and interpreting electronic and hard copy operating instructions and documents, including where used:
 - work instructions
 - standard operating procedures
 - formulas/recipes
 - production and batch sheets
 - temporary instructions
 - other provided operating instructions
- working within access control requirements of the planning software system
- identifying modules, screens, files, and so on, of software relevant to own work
- logging in and using terminals and planning software at a level of access appropriate to own work
- accurately inputting data
- searching and retrieving data
- accessing nominated assistance with planning software

Required knowledge

Required knowledge includes:

- technical knowledge needed to operate own work processes
- planning software system and operation, including:
 - terminal locations and types
 - security and access arrangements
 - range of information held in planning software relevant to own work
 - data collection methods for operations in work area
 - assistance arrangements for users of planning software
 - business activities exercised by/through the planning software system
- value created by operations for customers

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • identify the scope and relevance of planning software system to their own work • enter and retrieve data, including normal performance and variations • use planning software system to assist in own work • contribute suggestions for improvement to performance and relevance of planning software to own work area.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues

	<p>(third-party reports)</p> <ul style="list-style-type: none"> • portfolio of evidence <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz)
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	<ul style="list-style-type: none"> • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Planning software	<p>Planning software includes:</p> <ul style="list-style-type: none"> • software systems which integrate a range of business information, such as finance, logistics maintenance and production (frequently referred to as ERP, MRP, MRPII or a range of proprietary names)
Relevant data and information	<p>Relevant data and information may include:</p> <ul style="list-style-type: none"> • technical and other drawings • standard operating procedures and other work instructions • production schedules including historical data • orders and order tracking information • stock control • contact lists • occupational health and safety (OHS) information
Value stream	<p>The value stream begins with the customer and includes all actions (both value-adding and non-value added) by both internal sections/departments and external organisations to meet a customer requirement.</p> <p>Depending on the operations and the customer requirement, stages where value stream actions may occur include:</p> <ul style="list-style-type: none"> • sales outlet/representative • information gathering, data analysis and research • product design • raw material sourcing • intermediate processing

	<ul style="list-style-type: none"> • final assembler/collation/preparation • support services (e.g. accounting, finance and legal) • storage and delivery to customer • after market support
Items in the value stream	<p>Items in the value stream refer to information held within the planning software system that contributes to creating value as determined by the customer. Depending on the organisation it may include:</p> <ul style="list-style-type: none"> • physical elements of the production system, such as sites, work stations, equipment, material, including stock, work in progress and finished products • information needed to meet customer requirements, such as designs, drawings, work instructions, standard operating procedures, standards, material lists and pricing • information not directly related to current customer requirements but required by the organisation
Procedures	<p>Procedures may include:</p> <ul style="list-style-type: none"> • work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions and similar instructions provided for the smooth running of the plant • good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) • government regulations <p>Procedures may be:</p> <ul style="list-style-type: none"> • written, verbal, computer-based or in some other format

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS403001A Implement competitive systems and practices

Modification History

New unit, superseding MSACMS400A Implement a competitive manufacturing system - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to implement and review competitive systems and practices in a person's own work within a team or work area, including the consideration of the impact on the work of others. The unit focuses on the holistic application of competitive systems and practices to achieve improved performance in own work and in activities with others in the team or work area that contribute to improving customer benefit.

Application of the Unit

This unit applies to individuals who are applying competitive systems and practices to their own work in a way that integrates with others in the team or work area who are also implementing competitive systems and practices. Depending on the operations or processes in the team or work area the unit may also include interaction with other teams and work areas.

The unit is suitable for individuals who have formal responsibility for the work of others, such as team leaders. It is also suitable for individuals, such as technicians and tradespeople, who must integrate the application of their technical skills with the implementation of competitive systems and practices in an organisation.

The unit applies to the areas of cost, quality, delivery, safety/environment, and employee capability including continuous reviewing of performance against these five areas in liaison with other relevant people. Improvement initiatives in these five areas are usually developed and implemented with the support of technical support staff. Whereas other units may emphasise the competence to use one or more competitive practices, this unit emphasises the ability to advance on all five key areas over a moderate time period.

This unit requires the application of skills associated with problem solving and initiative and enterprise in order to identify opportunities to make improvements and maximise performance. Communication, the ability to work in a team and planning and organising skills are required to implement improvements and address any conflicts that arise. This unit also requires an ability to identify appropriate technology, and to consider and integrate feedback on how personal performance can be improved.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Contribute to the improvement of the operations system in team or work area	1.1	Identify key performance indicators for area of operations
		1.2	Implement and review competitive systems and practices to improve health, safety and environment (HSE) performance of self and others
		1.3	Implement and review competitive systems and practices to maximise quality consistency
		1.4	Implement and review competitive systems and practices and identify any skill and training issues that need to be addressed to improve capability of self and others
		1.5	Implement and review competitive systems and practices to maximise customer benefit/cost ratio
		1.6	Implement and review competitive systems and practices to reduce lead time to delivery within the scope of authority and responsibility
		1.7	Work with relevant stakeholders to resolve conflicts

- which arise from implementation of competitive systems and practices
- 1.8 Select improvements which will deliver the greatest overall benefit for the resources required/available without reducing current performance on individual factors
- 2 Implement improvements
- 2.1 Implement the chosen improvement/s
- 2.2 Check the selected improvements improve the system as a whole and do not result in unintended consequences
- 2.3 Monitor implementation and make adjustments, as required

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- communicating with others to clarify scope of implementation of competitive systems and practices, including:
 - value stream mapping
 - 5S
 - Just in Time (JIT)
 - mistake proofing
 - process mapping
 - establishing customer pull
 - kaizen and kaizen blitz
 - setting of key performance indicators/metrics
 - identification and elimination of waste (muda)
- monitoring performance in key areas, including:
 - HSE performance
 - quality consistency
 - capability and performance by team members
 - customer benefit/cost ratio
 - reduce lead time to delivery

- contributing suggestions for improvement
- analysing operational procedures in terms of flow and contribution to customer outcomes
- planning tasks to support competitive systems and practices implementation
- identifying and implementing appropriate data gathering and analysis techniques within area of responsibility to identify change over time in indicators relating to:
 - cost
 - quality
 - delivery
 - safety/environment
 - employee capability and support for competitive systems and practices
- solving problems to root causes

Required knowledge

Required knowledge includes:

- customers and the value they derive from products and processes of the organisation or area
- cost components and their relationship to customer benefits/features
- suppliers and their capabilities
- waste (muda)
- factors causing variability in a product and how to control them
- factors that promote standardisation
- relevant competitive systems and practices tools for area and how to apply them
- factors impacting on the product, process and waste, particularly those wholly or partially under own and other immediate area employees control (and how to control them)
- good HSE practice and factors impacting on HSE performance
- own capability and how to improve it
- optimisation techniques appropriate to the organisation and the job
- application of quality standards and processes

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of their ability to:</p> <ul style="list-style-type: none"> • identify key performance indicators appropriate to their own work area
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	<ul style="list-style-type: none"> • implement and review competitive systems and practices in own work, including interaction with others in the work area in the areas of: <ul style="list-style-type: none"> • HSE performance • quality consistency • capability and performance by team members • customer benefit/cost ratio • reduce lead time to delivery • select improvements that deliver the greatest overall benefit • monitor the implementation of improvements and make appropriate adjustments.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning for appropriate portions • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess</p>

	<p>underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • JIT, kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping
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	<ul style="list-style-type: none"> • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Competitive systems and practices tools	<p>Competitive systems and practices tools include:</p> <ul style="list-style-type: none"> • 5S • 6 sigma • continuous improvement • cause effect diagrams
Customer	<p>Competitive systems and practices organisations encompass the entire production system, beginning with the customer, and includes:</p> <ul style="list-style-type: none"> • the product sales outlet • the final assembler • product design • raw material mining and processing • all tiers of the value stream (sometimes called the supply chain) <p>Customer may include:</p> <ul style="list-style-type: none"> • internal or external customers, and should also include the final customer as the basis for the identification of waste <p>The unit does not require interfacing directly with the external customer, but there should be sufficient information to identify customer benefits and features</p>
Supplier	<p>Supplier may include:</p> <ul style="list-style-type: none"> • an internal supplier • an external supplier <p>The unit does not require interfacing directly with external suppliers, but there should be sufficient information to enable identification of supplier abilities</p>
Waste	<p>Waste (also known as muda in the Toyota Production</p>

	<p>System and its derivatives) is any activity which does not contribute to customer benefit/features in the product. Categories of waste include:</p> <ul style="list-style-type: none"> • excess production and early production • delays • movement and transport • poor process design • inventory • inefficient performance of a process • making defective items • other activities which do not yield any benefit to the organisation or any benefit to the organisations customers
Operations	<p>Operations indicate:</p> <ul style="list-style-type: none"> • the holistic combination of the process, plant and equipment, procedures and practices, including the skills and work organisation of the workforce, which make up the productive organisation
Implement improvements	<p>Implementation of improvements may be undertaken:</p> <ul style="list-style-type: none"> • within own job role • as part of processes and operations in the work area or team

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS403010A Facilitate change in an organisation implementing competitive systems and practices

Modification History

New unit superseding MSACMC410A Lead change in a manufacturing environment - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required by individuals responsible for facilitating change processes in an organisation implementing competitive operational practices.

Application of the Unit

This unit applies to people who facilitate the change process resulting from implementing one or more competitive systems or practices. This implementation may also be associated with other changes, such as the introduction of new products, processes or equipment. The unit will usually apply to people whose responsibility is at the team, area or section level rather than the whole organisation. The responsibility may be formally designated or be informal, as in mentoring and assisting fellow employees.

This unit assumes that consultation and agreement on the implementation of the competitive systems and practices and other associated changes has already occurred and the nature and extent of the change has been agreed.

This unit does not cover the negotiation of change in a formal industrial relations sense but does cover the skills needed to identify real or potential change implementation issues, including those that may need to be referred to formal consultation and/or dispute settlement procedures.

This unit has a strong emphasis on planning, encouraging and facilitating in a changing environment within the organisation, including using appropriate communication, teamwork, problem solving, initiative and self-management.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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|---|--|-----|--|
| 1 | Define nature and impact of change for designated area and processes | 1.1 | Identify the organisation's aims and objectives for the competitive systems and practices techniques related to the change process |
| | | 1.2 | Identify opportunities for implementation of change within work area |
| | | 1.3 | Determine impacts of change for work area, including potential benefits and impacts on own work and work of fellow employees |
| 2 | Identify key performance indicators (KPIs) | 2.1 | Liaise, where required, with managers, engineers and other staff responsible for designing and/or implementing change |
| | | 2.2 | Identify KPIs for own work responsibility and that of the work area |
| | | 2.3 | Communicate KPIs to fellow employees |
| | | 2.4 | Check that data collection and processing are appropriate for KPIs |
| | | 2.5 | Raise and resolve issues related to KPIs with relevant personnel |

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|---|---|-----|---|
| 3 | Liaise with key stakeholders | 3.1 | Identify key stakeholders impacted by the change |
| | | 3.2 | Communicate with key stakeholders within scope of authority |
| | | 3.3 | Identify and address issues and concerns of each stakeholder if within scope of authority |
| | | 3.4 | Develop and/or locate information required to address key concerns |
| | | 3.5 | Refer issues and concerns outside of scope of authority to appropriate personnel |
| 4 | Develop a strategy to help implement change | 4.1 | Identify or develop a work plan for implementing change |
| | | 4.2 | Make information required to support change available to team members |
| | | 4.3 | Communicate/circulate draft work plan to other employees in work area, supervisors, technical experts and other appropriate personnel for comment |
| | | 4.4 | Assess suggested changes and incorporate into work plan, where appropriate |
| 5 | Implement change | 5.1 | Obtain authorisation to commence change implementation in accordance with organisation procedures |
| | | 5.2 | Implement change in accordance with work plan and organisational occupational health and safety (OHS) and consultation procedures |
| 6 | Monitor implementation of change | 6.1 | Maintain open communication channels with all stakeholders during implementation |
| | | 6.2 | Monitor KPIs during implementation |
| | | 6.3 | Encourage and facilitate improvement suggestions of team members |
| | | 6.4 | Identify areas requiring improvement in change |

implementation

- 6.5 Make improvements to implementation according to organisation procedures

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- identifying the competitive operational practices being implemented in the organisation, including:
 - Just in Time (JIT) and kanban systems
 - preventative maintenance
 - 5S housekeeping
 - continuous improvement processes (e.g. kaizen)
 - waste (muda) elimination
 - formal problem solving procedures (e.g. root cause analysis (RCA))
- identifying other products, processes or equipment changes being implemented within area of responsibility
- identifying the work and culture changes required for effective implementation of the competitive systems and practices being implemented and other products, processes or equipment changes
- identifying organisation KPIs and contextualise for area of responsibility to determine successful change implementation
- planning strategies for change implementation, including:
 - required communication with others
 - negotiations if any required with internal and external suppliers, customers and delegates
 - analysis of any skill gaps in self and others
 - required training
 - data collection
 - work organisation and procedure changes
 - risk identification and contingency measures
- monitoring performance against KPIs and taking appropriate corrective action in the event of a non-conformance
- identifying and communicating with sources of assistance if difficulty is experienced with changes

Required knowledge

Required knowledge includes:

- features of common competitive operational practices, including:
 - JIT and kanban systems
 - preventative maintenance
 - 5S housekeeping
 - continuous improvement processes (e.g. kaizen)
 - waste (muda) elimination
 - formal problem solving procedures (e.g. RCA)
- health, safety and environment (HSE) principles and requirements for area of responsibility
- change implementation contacts and procedures relevant to work area
- employee assistance mechanisms in the organisation
- processes to develop work plans, including consideration of timetable, KPIs, training needs, OHS implications, contingency plans and responsibilities (the work plan must be capable of being coherently communicated to others)

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • identify the competitive systems and practices used in their own work • identify changes to their own work flowing from the implementation of the relevant competitive systems and practices • implement changes • know when and how to seek assistance with work changes • make suggestions for improvements.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned,

	<p>currently being implemented, or implemented changes to work processes and procedures relevant to the assessee</p> <ul style="list-style-type: none"> • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using some combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
<p>Guidance information for assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of

the item, and local industry and regional contexts) may also be included.

<p>Competitive systems and practices</p>	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • JIT, kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
<p>Team</p>	<p>Team may include:</p> <ul style="list-style-type: none"> • work teams from all sections of an organisation, including production or other operational areas, maintenance, technical, administration/finance, and sales/marketing
<p>Change</p>	<p>The philosophy of continual improvement is that every</p>

	<p>process can and should be continually evaluated and improved in terms of time required, resources used, resultant quality, and other aspects relevant to the process.</p> <p>Superimposed on this is the concept of breakthrough change when a large change/improvement is made which can shift the direction or operation of the organisation. Once such breakthrough change is the introduction of competitive operational practices.</p>
Work plan for change	<p>The work plan for change covers the designated work area and may include, depending on the organisation and work area processes:</p> <ul style="list-style-type: none"> • timetable • KPIs • training needs • OHS implications • contingency plans • responsibilities with team members and senior managers, engineers and other staff responsible for designing and/or implementing change
Issues and concerns	<p>Issues and concerns may be communicated formally and informally and may include:</p> <ul style="list-style-type: none"> • individual and group concerns • those expressed by and through industrial processes
Gathering and monitoring performance data	<p>Performance data may be gathered and monitored:</p> <ul style="list-style-type: none"> • manually by individual employees through charts, tally sheets or keypad/board entry • automatically through software, such as SCADA software, ERP systems, MRP and proprietary systems

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS403032A Analyse manual handling processes

Modification History

New unit, superseding MSACMT432A Analyse manual handling processes - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to analyse manual handling in terms of its efficiency and safety.

Application of the Unit

This unit applies to an individual who is required to examine the manual handling component of a job and improve it in terms of safety, effort required and efficiency. This may be conducted for a job performed by others or it may be for the person's own job.

This unit primarily requires the application of skills associated with problem solving, initiative and enterprise to identify safe and efficient manual handling, and planning and organising to ensure processes are implemented. This unit also requires communication with, and involvement of, others to ensure they understand the approach and to facilitate training.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Assess manual handling risks	1.1	Identify manual handling hazards in work area
		1.2	Assess risks arising from manual handling hazards
2	Analyse physical effort requirements of job	2.1	Determine basic manual handling requirements of job
		2.2	Analyse requirements in terms of components, such as lift, move, place and hold
		2.3	Analyse items to be handled in terms such as weight, size, shape or other hazards
3	Determine time/effort components of physical effort	3.1	Break required movement pattern down into movement components
		3.2	Determine time and effort requirements for movements
		3.3	Develop alternative movement patterns
		3.4	Determine time and effort requirements for alternative movements
		3.5	Determine handling aids required to assist movement
		3.6	Determine preferred movement pattern
4	Analyse the ergonomics of physical effort	4.1	Analyse the ergonomics of the preferred movement pattern
		4.2	Develop substitute movements for any movement which is not ergonomically sound
		4.3	Determine handling aids required to improve ergonomics of required movements
5	Optimise	5.1	Select movement patterns which are ergonomically

application of physical effort		sound and time and effort efficient
	5.2	Ensure all relevant people are trained to use these methods
	5.3	Ensure procedures and practices reflect the optimum methods
	5.4	Communicate with team members and involve them in development of alternatives to ensure awareness and facilitate learning

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- communicating with others about work processes and jobs
- identifying ergonomically sound and unsound movements both at a general level and related to individual capability
- analysing manual handling processes
- working cooperatively with others
- demonstrating or arranging to have demonstrated ergonomically correct movements
- applying basic mathematics
- solving problems

Required knowledge

Required knowledge includes:

- relevant occupational health and safety (OHS) Acts and regulations as applied to manual handling
- principles of job and work method design as applied to efficient and safe movement
- principles of work analysis
- principles of ergonomics/safe movement
- aids that can assist with or substitute for manual handling

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of their ability to:</p> <ul style="list-style-type: none"> • analyse manual handling requirements and risks in jobs • distinguish between ergonomically sound and unsound movement • analyse manual handling movements and risks for an individual • relate manual handling requirements to job efficiency.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using some combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence.

	<p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE)
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	<ul style="list-style-type: none"> • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Procedures	<p>Procedures may include:</p> <ul style="list-style-type: none"> • work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions and similar instructions provided for the smooth running of the plant • good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and Responsible Care) • government regulations <p>Procedures may be:</p> <ul style="list-style-type: none"> • written, verbal, computer-based or in some other format
Manual handling hazards	<p>Manual handling hazards may include:</p> <ul style="list-style-type: none"> • loads that pose a risk of injury • ergonomically unsound movements • hazard requirements as defined by relevant OHS Acts and regulations, industry standards and best practice
Ergonomically unsound movements	<p>Ergonomically unsound movements may include:</p> <ul style="list-style-type: none"> • awkward and repetitive movements • carrying, pushing, pulling or lifting of heavy loads • carrying or movement against hard, sharp, slippery or other difficult to grasp loads <p>Ergonomically unsound movements should be assessed against the capabilities of individual workers as what is a sound movement for one worker may be unsound for</p>

	others depending on physique and individual condition
Ergonomically sound movements	<p>Ergonomically sound movements are movements which decrease the risk of injury. Sound movements will vary according to the load and individual. Examples include:</p> <ul style="list-style-type: none">• keeping loads close to the body and near the person's centre of gravity• using diagonal foot positions for lifting• moving loads at waist height rather than directly from the floor

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS403051A Mistake proof an operational process

Modification History

New unit, superseding MSACMT451A Mistake proof a production process - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to make changes to own and others work in a work area which prevents errors and/or backsliding to a pre-improvement level of practice.

Application of the Unit

This unit applies to a person who needs to analyse a process that a team is responsible for and determine methods of mistake proofing it (e.g. ensuring it only produces product within an acceptable range or error-free transport and storage of goods). The person will typically be a technical expert, team leader or be in a role where they have sufficient technical understanding of processes in their own work and that of others to be able to mistake proof the production process in their area. After improvement activities have been undertaken these improvements need to be sustained.

This unit requires the application of skills associated information gathering and analysis. Initiative, enterprise and problem solving are also required to identify mistakes and determine strategies for eliminating them. This unit also requires communication and teamwork skills to ensure mistake proofing strategies are implemented and self-management and learning skills to continually reflect on and integrate feedback about the effectiveness of strategies.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Analyse process	1.1	Identify sources of variability/non-conformance in the process
		1.2	Identify critical control points in process
		1.3	Analyse causes of variability/non-conformance
2	Develop preventative techniques/systems	2.1	Liaise with team members and other people to develop mistake proof options for performing operation
		2.2	Test and validate mistake proofing options
3	Implement permanent fix	3.1	Liaise with relevant people to have systems/procedures changed to implement solution
		3.2	Liaise with relevant people to implement the solution
		3.3	Liaise with relevant people to ensure self and others in the team or work area have an appropriate skills set
		3.4	Follow through to ensure implementation occurs
4	Monitor implementation	4.1	Critically observe the implementation
		4.2	Compare the results of the implementation against the expected outcomes
		4.3	Modify solution to improve outcomes

- 4.4 Ensure procedures reflect change
 - 4.5 Ensure training/assessment reflects change
 - 4.6 Audit change at agreed period/cycle
 - 4.7 Take action on any observed deviation
- 5 Seek improvements
- 5.1 Observe changes
 - 5.2 Analyse process again, if required, to ensure improvements are sustained

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- communicating with team or work group members, technical support personnel and other relevant staff
- explaining mistake proofing and related concepts
- facilitating input of others and encouraging acceptance of changes
- analysing and visualising operations in terms of flow and contribution to customer outcomes
- solving problems to determine root cause of errors and possible solutions
- analysing and interpreting information about errors and mistake proofing options in terms of cost, feasibility, regulations and value to the customer
- suggesting design changes to operations and products that eliminate the potential for errors
- suggesting mechanisms or procedures that warn of errors where operations cannot be designed to eliminate errors,

Required knowledge

Required knowledge includes:

- mistake proofing concepts, including, in priority order:
 - eliminate the possibility of the error via changes to the process
 - prevent the error from occurring via physical or virtual barriers
 - reduce likelihood of the error by encouraging correct action

- mitigate the impact of the error if it does occur
- understanding of processes undertaken by team
- factors in the processes which may cause variability
- methods of controlling the variability in the process
- mistake proofing methods relevant to the process/product

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • analyse variability and non-conformances • identify, analyse and evaluate information from a variety of sources to identify errors and options for mistake proofing • facilitate implementation of mistake proofing activities that reduce waste • facilitate sustaining the mistake proofing activities.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace

	<ul style="list-style-type: none"> • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related
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	<p>operations control systems</p> <ul style="list-style-type: none"> • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
<p>Mistake proofing</p>	<p>Mistake proofing is based on the concept of zero defects. The first priority is to eliminate the possibility of an error occurring. However, where this is not feasible mistake proofing can be used to reduce the occurrence of errors and/or to minimise their impact.</p> <p>Mistake proofing should target an error in the following priority order:</p> <ul style="list-style-type: none"> • eliminate the possibility of the error via changes to the process • prevent the error from occurring via physical or virtual barriers, • reduce likelihood of the error by encouraging correct action (e.g. through warning systems) • mitigate the impact of the error if it does occur <p>Mistake proofing is also called error proofing or baka-yoke or poka-yoke</p>
<p>Options for mistake proofing</p>	<p>Factors to consider when prioritising options for mistake proofing will vary according to the process and may include:</p> <ul style="list-style-type: none"> • success rate in eliminating errors

	<ul style="list-style-type: none"> • feasibility • skills required by employees • cost • capacity to reduce waste
<p>Procedures</p>	<p>Procedures may include:</p> <ul style="list-style-type: none"> • all work instructions • standard operating procedures • formulas/recipes • batch sheet • temporary instructions and similar instructions provided for the operation of the plant • good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) • government regulations <p>Procedures may be:</p> <ul style="list-style-type: none"> • written, verbal, computer-based or in some other format

Unit Sector(s)

Unit sector Competitive systems and practices

Custom Content Section

Not applicable.

MSS404050A Undertake process capability improvements

Modification History

New unit, superseding MSACMT450A Undertake process capability improvements* - Equivalent

* New prerequisite *MSS404052A Apply statistics to operational processes* superseding MSACMT452A Apply statistics to processes in manufacturing

Unit Descriptor

This unit of competency covers the skills and knowledge required to make process capability improvements, including analysing data from the process, developing improvements to eliminate variation due to assignable causes, and then implementing actions.

Application of the Unit

This unit applies to a person who reviews a range of process capability data and information, makes/arranges for changes to be made to procedures, equipment or process and then recalculates the process capability and monitors resulting improvement actions. The person will typically be a technical expert, team leader or be in a role where they have sufficient technical understanding of processes in their own work and that of others to be able to suggest and justify process capability improvements.

Process capability may have been determined using either a six sigma or three sigma processes. This unit applies to the application of statistical methods and the determination of capability based on those methods. Other related units may be *MSS404052A Apply statistics to operational processes* and *MSS404053A Use six sigma techniques*

This unit primarily requires the application of skills associated with communication, information gathering and analysis. Initiative, enterprise and problem solving are also required to identify opportunities to improve process capacity. This unit also requires aspects of self-management and learning to validate own analysis.

For a qualitative approach to improvement (one not using statistics) see *MSS403051A Mistake proof an operational process*.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MSS404052A Apply statistics to operational processes

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Obtain required data	1.1	Identify process for study
		1.2	Obtain/organise process to obtain required data/information
2	Analyse information	2.1	Analyse data and determine assignable causes
		2.2	Develop possible improvements to eliminate assignable causes
		2.3	Incorporate own experience and learning into proposed process improvement proposals
		2.4	Develop process improvement proposals
3	Improve process capability	3.1	Obtain required authorities to implement improvements
		3.2	Liaise with relevant people to implement improvements
		3.3	Obtain/organise required data for improved process

- 3.4 Recalculate process capability
- 3.5 Implement revised data collection/processing and new capability information
- 3.6 Monitor improvement actions and make adjustments, as necessary

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- performing relevant mathematical operations
- identifying and using relevant statistical methods
- communicating and explaining data-related changes and procedures to individuals and groups
- negotiating with other employees and managers on proposed improvement actions
- analysing procedures and data to establish variation
- solving problems to root cause where assignable cause of variation is not obvious
- working in a team
- using computer software relevant to required analyses and process

Required knowledge

Required knowledge includes:

- data collection methods
- data processing techniques required
- variability and normal distribution
- three sigma or six sigma processes, as relevant
- random and non-random results (recognition of assignable causes)
- causes of different types of non-random results
- causes of random variation
- process understanding sufficient to translate the data into variations in the process and determine methods of controlling them

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • analyse process information • calculate process capability/trial limits • improve process capability (or organise for it to be improved) • analyse revised process information and recalculate process capability.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence <p>In all cases it is expected that practical assessment will</p>

	<p>be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time
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	<ul style="list-style-type: none"> • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Process capability	<p>Process capability is:</p> <ul style="list-style-type: none"> • the measurable ability of a process to reliably produce within calculated limits (the limits depend on the variation of the process)
Variation	<p>All processes have variation. The approach in this unit is to separate random variation (no assignable cause) from non-random variation (which has an assignable cause). By finding and eliminating assignable causes, total variation is reduced and process capability will be improved</p>
Six sigma	<p>Six sigma refers to:</p> <ul style="list-style-type: none"> • a statistical tool for recording defects and determining capability. Six sigma limits equate to 3.4 defects per million opportunities for each product or service transaction. Six sigma is also used as a general term covering a competitive systems and practices approach. Six sigma training typically covers several units of competency in this Training Package
Three sigma	<p>Three sigma refers to:</p> <ul style="list-style-type: none"> • a traditional statistical process control. Three sigma limits equate to 3 defects per thousand opportunities for each product or service transaction
Required data	<p>The calculation of three sigma or six sigma limits requires process data. The data required depends on the nature of the limits being calculated</p>
Assignable cause	<p>Any non-random variation is said to have an 'assignable cause'. The methods of data analysis common to statistical capability analysis as well as other methods of</p>

	root cause analysis should be used to determine the cause of this non-random variation
Improved process capability	<p>Improvements to process capability result from eliminating the causes of non-random variation. The improvements made may be:</p> <ul style="list-style-type: none"> • as a result of continuous improvement with the process capability being recalculated periodically • as a result of an improvement project with the process capability recalculated as part of that project
Procedures	<p>Procedures may include:</p> <ul style="list-style-type: none"> • work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions and similar instructions provided for the smooth running of the plant • good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) • government regulations <p>Procedures may be:</p> <ul style="list-style-type: none"> • written, verbal, computer-based or in some other format

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS404052A Apply statistics to operational processes

Modification History

New unit, superseding MSACMT452A Apply statistics to processes in manufacturing - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to apply statistical theory and principles to the analysis and control of processes and operations.

Application of the Unit

This unit applies to a person working in an organisation applying statistical process control on processes or operations. The statistical process control will usually be used to monitor the processes or operations and determine when action needs to be taken. The appropriate action will then be taken in accordance with standard procedures.

The unit includes applying knowledge of frequency distribution and variation to the data/chart to distinguish between random and non-random variation and assumes understanding of the process and/or equipment to help interpret those results.

This unit primarily requires the application of skills associated with gathering and analysing data and communicating statistical information to others. This unit also has a strong emphasis on problem solving, initiative and enterprise, planning and organising, and self-management to solve problems and manage processes.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Collect process data	1.1	Interpret sampling scheme
		1.2	Obtain measurements in accordance with standard procedures
		1.3	Handle data, as required
2	Interpret data	2.1	Plot data on appropriate control chart
		2.2	Distinguish between random and non-random patterns of results
		2.3	Identify results outside the control limits
		2.4	Recognise situations requiring action
		2.5	Take appropriate action in accordance with standard procedures
		2.6	Determine cost of non-conformance
3	Calculate control limits	3.1	Consult relevant stakeholders to determine appropriate limits
		3.2	Use relevant methods to calculate/revise control limits
		3.3	Plot limits on control chart
		3.4	Explain impact of limit to relevant stakeholders

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- applying a range of sampling procedures
- analysing samples and data for variation, relevance, reliability and representativeness
- problem solving the causes of variation in a process
- communicating with other employees to obtain samples/data and to explain results and limits
- plotting or documenting results
- undertaking calculations, including:
 - basic arithmetic functions
 - mean, range, mean of means, standard deviation (using appropriate calculation aids)
- using statistics to support process and operations control

Required knowledge

Required knowledge includes:

- sampling techniques
- purpose of sampling and measurement
- random, systematic and stratified sampling
- purpose of replication of data for statistical control
- samples, populations, finite and infinite populations and the differences
- methods of calculating means, standard deviations and the like and their purpose in statistical control
- the meaning of broad/narrow frequency distributions/range/standard deviations and skewed distributions in process terms
- concept of limits, including:
 - 1 sigma warning limits
 - 2 sigma warning limits
 - 3 sigma control limits
 - 6 sigma limits
- types of control charts and their applications to different types of process/product and for different purposes
- process causes of variation and typical cause types of non-random variation
- non-process (e.g. measurement) causes of variation
- recognition of stable and unstable processes
- causes of stability/instability in the process

- calculation of control limits/process capability and the applications of different control limits
- the standard distribution curve and confidence limits

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • follow sampling procedures • apply basic statistical processes • analyse data to identify variations and non-conformances • plot or document results.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning

	<ul style="list-style-type: none"> • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen)
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	<ul style="list-style-type: none"> • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Sampling scheme	<p>Sampling scheme may include:</p> <ul style="list-style-type: none"> • sampling for attributes or sampling for variables • batch, continuous or custom made products • number of items/samples • size of sample • timing of sampling • location of sampling points • type of sample • number/type of measurements to be done on each sample • sampling equipment • measurement/testing equipment/methods
Procedures	<p>Procedures may include:</p> <ul style="list-style-type: none"> • work instructions • standard operating procedures • formulas/ recipes • batch sheets • temporary instructions and similar instructions provided for the smooth running of the plant • good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) • government regulations <p>Procedures may be:</p> <ul style="list-style-type: none"> • written, verbal, computer-based or in some other

	format
Handle data	<p>Handle data may include:</p> <ul style="list-style-type: none"> • calculating means, ranges, mean of means and standard deviations (using appropriate calculation aids) • entering data into a software package • recording data either in writing or electronically • other required manipulations of the data
Control chart	<p>Control charts may include:</p> <ul style="list-style-type: none"> • run • tally • mean/range • attributes • other relevant charts
Random	Random variation is the term used in statistical control to refer to those variations for which no cause can be found
Non-random	Non-random (also called identifiable cause, assignable cause or special cause) are those variations for which a cause can be found and so the cause of the variation eliminated. Non-random variation may also be used to predict possible breaches of the control limits
Control limits	Control limits (also referred to as process capability) are those limits within which the process will operate if it is 'under control'
Cost of non-conformance	<p>Cost of non-conformance includes:</p> <ul style="list-style-type: none"> • reprocessing/rework • expediting • unplanned service • excess inventory • complaint handline • downtime • returns • scrap • labour costs • material costs • infrastructure costs/overhead • utility costs
Appropriate limits	Appropriate limits may include:

	<ul style="list-style-type: none">• 1 sigma warning limits• 2 sigma warning limits• 3 sigma control limits• 6 sigma limits
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Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS404060A Facilitate the use of planning software systems in a work area or team

Modification History

New unit, superseding MSACMT460A Facilitate the use of planning software systems in manufacturing* - Not equivalent

* Prerequisite *MSACMT260A Use planning software systems in manufacturing* - removed

Unit Descriptor

This unit of competency covers the skills and knowledge required to facilitate the use of planning software in an organisation in a person's work area or team. These systems are known by various generic names, such as Enterprise Resource Planning (ERP), Materials Resource Planning (MRPII, MRP III etc.) or by proprietary names.

Application of the Unit

This unit applies to a person who will access the planning software system for their own work, but will also need to provide support and organise skill development programs for their team or work group members. The person will typically be a technical expert, team leader or be in a role where they have sufficient technical understanding of processes in their own work and that of others to be able to facilitate the use of the planning software system.

The planning software system will be used routinely in the work of the team or work group.

This unit primarily requires the application of skills associated with using communication technology and supporting team use of planning software. Problem solving, initiative and enterprise, and planning and organisational skills are required to ensure that planning software is used efficiently. This requires aspects of learning and self-management to ensure own performance and that of the team.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Identify scope of planning software	1.1	Identify categories of information held by planning software
		1.2	Identify information categories relevant to team and area processes
		1.3	Identify range of information able to be provided to planning software by team or work group
		1.4	Identify range of information able to be provided to team or work group by planning software
2	Communicate using the planning software system	2.1	Send and receive information using planning software
		2.2	Send and receive messages using planning software
3	Make decisions using planning software	3.1	Interrogate the planning software system to find required current, historical or predicted information
		3.2	Take actions appropriate to the information in accordance with procedures
4	Monitor the use of	4.1	Routinely monitor planning software information

planning software	4.2	Review performance and use of planning software with team
5 Support others to use planning software	5.1	Regularly communicate with team or other work group members, both using planning software and face to face
	5.2	Identify improvements required
	5.3	Take appropriate actions to implement improvements

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- entering and receiving information via planning software terminals
- communicating with team and organisation planning software support personnel
- engaging and motivating team in use of planning software
- identifying team or work group area information requirements
- identifying scope of information relevant to team and area available in planning software by categories
- planning and organising improvements in team's use of planning software

Required knowledge

Required knowledge includes:

- hierarchy of planning software system and operation
- information available from/through the planning software system
- query facilities and information analysis capabilities offered by planning software
- support/training/skill development mechanisms available for access by team members

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • identify team or work group area information requirements and relate to planning software categories • lead and motivate others in using planning software • ensure information sent to planning software is accurate and appropriate • obtain regular and one-off information from planning software • make decisions using planning software generated information.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence.

	<p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
<p>Guidance information for assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Competitive systems and practices</p>	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, ERP systems, MRP and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time
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	<ul style="list-style-type: none"> • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Planning software	<p>Planning software is a general term applied to a number of software systems which integrate a range of business information, such as:</p> <ul style="list-style-type: none"> • sales/order taking • finance/accounting • logistics • maintenance • human resources • production <p>It is frequently referred to by names such as ERP or MRP/MRPII. In some cases it can be integrated with engineering applications, such as SCADA systems. In such cases the unit MSS402061A Use SCADA systems in operations may also be required</p>
Information and messages	<p>Information and messages able to be sent and received via the planning software will vary between programs and organisations. This unit assumes that a range of discretion is available to the team leader over the information and messages that can be sent or received. Examples of information and message categories include:</p> <ul style="list-style-type: none"> • orders • production/operations processes • scheduling (e.g. daily/weekly) • finance and accounting • human resources (e.g. rosters, reserves, training completed and scheduled) • quality requirements • customers • suppliers

<p>Value stream</p>	<p>The value stream begins with the customer and includes all actions (both value-adding and non-value added) by both internal sections/departments and external organisations to meet a customer requirement.</p> <p>Depending on the operations and the customer requirement stages where value stream actions may occur include:</p> <ul style="list-style-type: none"> • sales outlet/representative • information gathering, data analysis and research • product design • raw material sourcing • intermediate processing • final assembler/collation/preparation • support services (e.g. accounting, finance and legal) • storage and delivery to customer • after market support
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Unit Sector(s)

Unit sector Competitive systems and practices

Custom Content Section

Not applicable.

MSS404082A Assist in implementing a proactive maintenance strategy

Modification History

New unit, superseding MSACMT482A Assist in implementing a proactive maintenance strategy - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required by a maintenance person to assist in the implementation of a proactive maintenance strategy in an organisation. This unit includes the interaction between a maintenance worker and operators, as appropriate.

Application of the Unit

This unit applies to a maintenance person in an organisation that has adopted or is implementing total preventative/productive maintenance (TPM), reliability centred maintenance (RCM) or similar strategies. As part of this, the maintenance person is expected to assist in the implementation by determining appropriate maintenance related schedules and also by providing maintenance related assistance to non-maintenance personnel, such as assisting production personnel to fulfil their role in the TPM/RCM strategy.

This unit requires the application of skills associated with problem solving and initiative and enterprise in order to analyse maintenance requirements. Communication, teamwork and planning and organising skills will be required to implement reliability strategies. This requires aspects of self-management to ensure improvement of own performance and learning.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Develop components of reliability strategy for a work/plant area	1.1	Determine manufacturer's recommended inspection, servicing and related schedules for relevant plant
		1.2	Consult with relevant people with regard to appropriate inspections, services and schedules
		1.3	Discuss any conflicts with relevant people and seek resolution of conflicts
		1.4	Develop schedules in liaison with relevant people
		1.5	Identify inspections and servicing which may be done by operations personnel in liaison with relevant stakeholders
2	Assess current practice for maintenance implications	2.1	Identify the overall equipment effectiveness (OEE) or other organisation targets for equipment/plant
		2.2	Evaluate procedures for plant/equipment reliability implications
		2.3	Discuss current practices with relevant people to determine any plant/equipment reliability implications
		2.4	Recommend changes to improve plant/equipment reliability in accordance with procedures
3	Assist in implementing the reliability strategy	3.1	Arrange for schedules to be incorporated in relevant work plans
		3.2	Identify training needs in discussion with relevant

- personnel
- 3.3 Assist personnel to develop required skills for inspections/servicing within scope of authority
 - 3.4 Collect data/information as required by own work plan
 - 3.5 Compare data/information with performance indicators
 - 3.6 Recommend improvements to reliability strategy in accordance with procedures

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- explaining concepts and processes of chosen proactive maintenance strategy used by the organisation and distinguishing from traditional (breakdown) maintenance strategies
- communicating with operators, other maintenance personnel, team leaders and technical experts in a variety of situations and using different media
- adapting personal communication strategy to different levels of operator and team leader literacy and numeracy
- working in formal and ad-hoc teams to implement proactive maintenance
- solving problems to root cause
- planning proactive maintenance tasks to fit in with maintenance and production schedules and the needs of other staff
- assessing the ability of operations personnel with regard to inspections and servicing of equipment
- reading and interpreting charts and diagrams, manufacturer manuals and specifications and operating procedures

Required knowledge

Required knowledge includes:

- requirements of the proactive maintenance strategy being implemented
- operating principles and procedures for equipment/plant subject to proactive maintenance strategy
- purpose and processes for data collection in proactive maintenance strategies
- procedures relevant to own job and organisation implementation of proactive maintenance

- methods of making/recommending improvements

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • source information from manuals and other technical documentation or software • effectively communicate with users on equipment operational and maintenance history • develop schedules for maintenance activities including seeking technical assistance, where appropriate • differentiate between proactive and traditional maintenance strategies.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation

	<ul style="list-style-type: none"> • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and
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	<p>analysis</p> <ul style="list-style-type: none"> • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • OEE • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise, the work organisation, culture • regulatory environment and the industry sector
TPM	TPM is an application of total quality management to maintenance with the intention of increasing reliability, getting it right first time and increasing OEE
RCM	RCM moves maintenance from reactive, or even planned/programmed, towards a focus on uptime and OEE
Similar strategies	<p>Similar strategies may include:</p> <ul style="list-style-type: none"> • mean time between failure (MTBF) which is one key measure of the effectiveness of a maintenance procedure, and is an indicator as to whether root causes are being found and resolved. If MTBF is reducing, then it is an indicator that the maintenance regime is failing • failure mode and effects analysis (FMEA) which is a systematic approach that identifies potential failure modes in a system, product, or equipment based operations caused by either design or operation/process deficiencies. It also identifies critical or significant design or process characteristics that require special controls to prevent or detect failure modes. FMEA is a tool used to prevent problems from occurring • industry sectors have highly adapted forms of FMEA

	<p>and which may practice traditional FMEA in say their routine maintenance while using another technique, such as Hazard and Operability Studies (HAZOP) for design and modification. HAZOP is a form of FMEA which has been practiced by the process industries for over 30 years and examines the implications of changes in process conditions to process stability</p> <ul style="list-style-type: none"> condition monitoring which often involves quite sophisticated monitoring of equipment, including such things as vibration monitoring, instrumental analysis of lubricating oil, and so on, to determine the current state of the equipment, monitor the change in this condition and predict when it needs servicing/maintenance to maintain reliability.
OEE	<p>OEE is the combination of the main factors causing loss of productive capacity from equipment/plant and is:</p> $OEE = \text{availability} \times \text{performance} \times \text{quality rate}$ <p>where:</p> <ul style="list-style-type: none"> availability takes into account losses due to breakdown, set-up and adjustments performance takes into account losses due to minor stoppages, reduced speed and idling quality rate takes into account the losses due to rejects, reworks and start-up waste
Uptime	<p>Uptime refers to the overall availability of the plant (it is the inverse of downtime) or the unavailability of the plant. Ideal uptime is 100%</p>
Inspection	<p>Inspection may include:</p> <ul style="list-style-type: none"> reading dials, gauges and meters observations, including those using sight, hearing, smell and feel observations of product quality/faults/rejects
Servicing	<p>Servicing may include:</p> <ul style="list-style-type: none"> cleaning lubricating topping up adjusting
Procedures	<p>Procedures may include:</p> <ul style="list-style-type: none"> work instructions standard operating procedures

	<ul style="list-style-type: none">• formulas/recipes• batch sheets• temporary instructions and similar instructions provided for the smooth running of the plant• good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care)• government regulations <p>Procedures may be:</p> <ul style="list-style-type: none">• written, verbal, computer based or in some other format
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Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS405001A Develop competitive systems and practices for an organisation

Modification History

New unit, superseding MSACMS600A Develop a competitive manufacturing system - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to develop new strategies for competitive systems and practices or make improvements to existing systems and practices.

Application of the Unit

This unit applies to a manager, technical specialist or similar in an organisation implementing competitive systems and practices, or in an organisation wishing to embark on the competitive systems and practices path. The person needs to be able to analyse the needs of the organisation and develop strategies and systems for effective implementation and continuous improvement of competitive systems and practices in the organisation.

This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information and consulting with stakeholders. Problem solving, initiative and enterprise, and planning and organising are required to determine effective competitive systems and practices strategies for the organisation. This unit also requires aspects of self-management and learning to ensure feedback and new learning is integrated into competitive systems and practices strategies.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|--|-----|---|
| 1 | Determine appropriate analytical techniques | 1.1 | Liaise with key stakeholders to determine objectives of operations strategy |
| | | 1.2 | Examine current operations to determine major areas requiring improvement |
| | | 1.3 | Compare possible strategies, techniques and tools against organisation needs |
| | | 1.4 | Select possible strategies, techniques and tools |
| | | 1.5 | Consult with key stakeholders to confirm selected strategies, techniques and tools |
| 2 | Develop competitive systems and practices strategies | 2.1 | Estimate benefit/cost ratio for major stakeholders and the value stream overall |
| | | 2.2 | Determine preferred operations strategy |
| | | 2.3 | Examine and adapt strategy to organisation needs and priorities |
| | | 2.4 | Examine and adapt competitive systems and practices techniques and tools required to implement strategy |
| | | 2.5 | Negotiate with key stakeholders to develop an implementation plan |
| | | 2.6 | Determine key information and performance indicators required |

3	Implement strategy	3.1	Determine data collection required
		3.2	Identify and evaluate methods of collecting and processing required data
		3.3	Determine hardware and other resources required
		3.4	Evaluate skill needs required
		3.5	Ensure all resources/training are available and completed
		3.6	Implement strategy
4	Monitor implementation of strategy	4.1	Compare information/performance indicators with desired levels
		4.2	Liaise with key stakeholders regarding strategy issues
		4.3	Identify areas requiring adjustment
		4.4	Make required adjustments

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- undertaking self-directed problem solving and decision-making on issues of a broad and/or highly specialised nature and in a wide variety of contexts
- analysing current state/situation of the organisation and value stream, including appropriateness of strategy, operations and internal and external relationships, including value stream members
- determining appropriate key performance indicators (KPIs) and overseeing data collection
- selecting appropriate competitive systems and practices tools and techniques, such as:
 - value stream mapping
 - 5S
 - Just in Time (JIT)
 - mistake proofing
 - process mapping

- establishing customer pull
- kaizen and kaizen blitz
- setting of KPIs/metrics
- identification and elimination of waste
- communicating at all levels in the organisation and value stream and to audiences of different levels of literacy and numeracy
- prioritising situations and actions based on:
 - customer benefit
 - cost/benefit analysis
- reviewing and modifying strategies and KPIs, as required

Required knowledge

Required knowledge includes:

- competitive systems and practices principles and tools, including:
 - value stream mapping
 - 5S
 - JIT
 - mistake proofing
 - process mapping
 - establishing customer pull
 - kaizen and kaizen blitz
 - setting of key performance indicators/metrics
 - identification and elimination of waste
- methods of estimating costs/benefits
- acceptable benefit/cost ratios
- continuous improvement principles
- principles of motivation and leadership
- characteristics and strengths of different types of strategies, techniques and tools, such as 5S, JIT, six sigma, lean operations and agile operations
- business goals sufficient to match the strategy to the business needs
- strategic thinking
- principles of process equipment and how to improve its reliability
- resources required and how to obtain them

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of their ability to:</p> <ul style="list-style-type: none"> • determine appropriate analytical techniques • develop strategies that deliver the greatest overall benefit • implement the strategies • monitor the implementation of the strategy.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to</p>

	accommodate ethnicity, age, gender, demographics and disability.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • JIT, kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures
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	<ul style="list-style-type: none"> • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
<p>Competitive systems and practices techniques and tools</p>	<p>Competitive systems and practices techniques and tools may include:</p> <ul style="list-style-type: none"> • value stream mapping • 5S • JIT • mistake proofing • process mapping • establishing customer pull • kaizen and kaizen blitz • setting of KPIs/metrics • identification and elimination of waste (muda) • standardisation
<p>Value stream</p>	<p>The value stream begins with the customer and includes all actions (both value-adding and non-value added) by both internal sections/departments and external organisations to meet a customer requirement.</p> <p>Depending on the operations and the customer requirement stages where value stream actions may occur include:</p> <ul style="list-style-type: none"> • sales outlet/representative • information gathering, data analysis and research • product design • raw material sourcing • intermediate processing • final assembler/collation/preparation • support services (e.g. accounting, finance and legal) • storage and delivery to customer • after market support

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS405004A Develop business plans in an organisation implementing competitive systems and practices

Modification History

New unit, superseding MSACMS603A Develop manufacturing related business plans - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to develop business plans in an organisation implementing competitive systems and practices.

Application of the Unit

This unit applies to a person in an organisation implementing competitive systems and practices (e.g. a production/plant manager, purchasing/technical officer or similar) who is required to develop a section business plan to meet the requirements of the overall strategic plan of the organisation. The plan includes the impact on the value stream and other critical competitive systems and practices factors. Due to competitive pressures this may be a reasonably frequent activity and can occur at any time over the business cycle. The plan may be in response to a specific change, or it may be a plan for the next period.

This unit assumes that up-to-date information about the organisation's role in the value stream is available. For detailed mapping and analysis of the value stream refer to MSS405002A Analyse and map a value stream.

This unit primarily requires the application of skills associated with gathering, analysing and applying information and consulting with stakeholders. Problem solving, initiative and enterprise, and planning and organising are required to develop an effective and measurable business plan. This unit also requires aspects of self-management and learning to ensure feedback and new learning is integrated into competitive systems and practices strategies.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Determine purpose of plan	1.1	Confirm reason for developing plan and expected outcomes from plan
		1.2	Confirm purpose of plan with all relevant stakeholders
		1.3	Check expected outcomes from plan with overall strategic plan for organisation
		1.4	Identify any potential areas for conflict between proposed plan and strategic directions
		1.5	Negotiate with relevant stakeholders to resolve issues
2	Develop objectives and strategies	2.1	Draft objectives for business plan
		2.2	Draft strategies to achieve these objectives
		2.3	Determine implications for value stream
		2.4	Determine capital or workplace layout/organisation implications for objectives and strategies
3	Develop plans to meet objectives	3.1	Negotiate with relevant stakeholders over implications for objectives and strategies

and strategies	3.2	In liaison with relevant stakeholders, develop plans to meet objectives
	3.3	Determine relevant key performance indicators (KPIs) for plan
	3.4	Check KPIs are appropriate for purpose of plan
	3.5	Check plan will deliver planned purpose
	3.6	Map plan to changed value stream
	3.7	Adjust plan to optimise value stream
	3.8	Validate plan with relevant stakeholders
4	4.1	Release plan for implementation
Monitor the implementation of the plan	4.2	Check the key progress points against the key stages of the plan
	4.3	Note any discrepancies
	4.4	Take appropriate action to ensure correct implementation of plan

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- communicating at all levels in the organisation and value stream and to audiences of different levels of literacy and numeracy
- undertaking self-directed problem solving and decision-making on issues of a broad and/or highly specialised nature and in a wide variety of contexts
- analysing organisation overall strategic plan for implications relevant to competitive systems and practices implementation
- determining appropriate KPIs and methods of data collection
- determining best means of gathering data, including data from monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary

systems

- identifying value stream members and performance
- determining implications of business plan for value stream
- analysing data, including competitive systems and practices indicators and verifying results with stakeholders
- determining key parameters for business plan, including:
 - scope
 - period
 - objectives in terms of customer benefit
 - relationship to overall organisation objectives
 - targets
 - KPIs
 - implementation strategy
 - risk management
 - monitoring and adjustment strategy
 - approval process

Required knowledge

Required knowledge includes:

- organisation strategic directions
- business planning methods and types of plans
- contingency planning and other risk mitigating planning tools
- the organisation's value stream
- analysis of value stream
- competitive systems and practices
- application of quality principles
- human resources and industrial relations
- occupational health and safety (OHS)

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>A person who demonstrates competency in this unit must be able to provide evidence of their ability to:</p> <ul style="list-style-type: none"> • develop a business plan that conforms to organisation
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	<p>overall strategic directions</p> <ul style="list-style-type: none"> • determine implications of business plan for competitive systems and practices practice in organisation • determine KPIs appropriate for business plan • monitor the implementation of a business plan and make adjustments as necessary.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>

<p>Guidance information for assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Competitive systems and practices</p>	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as SCADA software, ERP systems, MRP and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p>
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	<ul style="list-style-type: none"> the stage of implementation of competitive systems and practices the size of the enterprise the work organisation, culture, regulatory environment and the industry sector
Plan	<p>Plan may include:</p> <ul style="list-style-type: none"> any sort of business plan and may emphasise any of the areas for sub-plans over the others
Objectives	<p>Objectives may include performance in terms of:</p> <ul style="list-style-type: none"> sales profit quality OHS environment competitive systems and practices human, physical, financial and environmental/resource use
Objectives and strategies	<p>Objectives and strategies may include:</p> <ul style="list-style-type: none"> human and industrial relations practice material/component and resources use sustainable environmental practices sales and marketing financial regulatory compliance
Relevant stakeholders	<p>Relevant stakeholders may include:</p> <ul style="list-style-type: none"> other team members other workers management technical specialists other members of the value stream
Value stream	<p>The value stream begins with the customer and includes all actions (both value adding and non value added) by both internal sections/departments and external organisations to meet a customer requirement.</p> <p>Depending on the operations and the customer requirement stages where value stream actions may occur include:</p> <ul style="list-style-type: none"> sales outlet/representative information gathering, data analysis and research product design

	<ul style="list-style-type: none">• raw material sourcing• intermediate processing• final assembler/ collation/preparation• support services (e.g. accounting, finance and legal)• storage and delivery to customer• after market support
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Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS405062A Develop a documentation control strategy for an organisation

Modification History

New unit, superseding MSACMT662A Develop a documentation control strategy for a manufacturing enterprise - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to develop and implement a documentation control strategy for an organisation implementing a competitive systems and practices strategy or which is part of the value stream for such an organisation. The documentation control strategy might be needed to comply with ISO9000 or other reasons.

Application of the Unit

This unit applies to an individual (who may be a manager, technical specialist or other person) in an organisation implementing a competitive systems and practices strategy who is required to develop and/or improve a system to ensure operations and related supporting documents are controlled in a manner which is appropriate for their use in the organisation.

This unit primarily requires the application of problem solving, initiative and enterprise, and planning and organising skills associated with developing effective documentation strategies. This work is done in the context of using computer technology and also requires aspects of self-management and learning to ensure improvement of own performance.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|---|-----|---|
| 1 | Identify and obtain agreement to document management procedures and standards | 1.1 | Establish an appropriate working group of stakeholders |
| | | 1.2 | Agree on purpose and scope of document management standards, including interaction with production, maintenance, logistics, sales and marketing systems |
| | | 1.3 | Identify any relevant external standards, requirements and conventions |
| | | 1.4 | Agree on document control, tracking, updating and storage processes |
| | | 1.5 | Prepare document management processes and standards and circulate to relevant stakeholders |
| | | 1.6 | Negotiate any variations |
| 2 | Determine document style and establish standards and conventions | 2.1 | Consider potential document styles |
| | | 2.2 | Agree on document conventions and layout |
| | | 2.3 | Agree on standard symbols, abbreviations and similar |
| | | 2.4 | Produce a style sheet, document model or template, as appropriate |
| | | 2.5 | Check document style conforms to document management standards |
| | | 2.6 | Circulate to relevant stakeholders and negotiate any variations |

- | | | | |
|---|-------------------------------------|-----|---|
| 3 | Implement document control strategy | 3.1 | Develop a document control strategy and procedures, including arrangements for ongoing review of strategy |
| | | 3.2 | Establish mechanisms to check documents conform to the control strategy |
| | | 3.3 | Arrange for appropriate staff development |
| | | 3.4 | Monitor implementation of document control strategy |
| | | 3.5 | Make improvements to the documentation control strategy, as appropriate |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- leading and motivating a working group
- analysing scope and purpose of an organisation and matching to document control needs
- preparing briefings and arranging training for employees in document control strategy
- determining file management strategy for files from relevant computer applications which may include:
 - word processing
 - spreadsheets
 - databases
 - drawing and drawing linked applications e.g. computer aided drafting (CAD)/computer aided manufacturing (CAM)
- researching style manuals and other style reference materials for possible application to organisation style templates and guidelines
- using oral and written communication to convey broad and specialised information in a variety of media and formats

Required knowledge

Required knowledge includes:

- needs of the organisation and its' individuals
- word processing, spreadsheet and other software capable of producing files and documentation

- types of documentation used in organisations
- version and distribution control systems
- archiving systems
- document destruction systems
- legislative and regulatory requirements associated with documentation relevant to the organisation

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of their ability to:</p> <ul style="list-style-type: none"> • identify and establish organisation goals and requirements for document control • access and use relevant external standards, requirements and conventions to determine implications for document control strategy • produce document control guidelines and procedures and verify for accuracy and suitability for application across organisation.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a</p>

	<p>combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems
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	<ul style="list-style-type: none"> • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Documents	<p>Documents may be:</p> <ul style="list-style-type: none"> • hard copies of documentation, such as correspondence, procedures, contracts, agreements, specifications, production and other records, manuals and other reference materials • computer files, including word processed files and spreadsheets • technical drawings both hard copy or CAD files
Document control strategy	<p>The document control strategy should include procedures for:</p> <ul style="list-style-type: none"> • authoring control • version control • access and distribution • review and revision • storage and archiving • access and security • approval for and means of destruction

Archiving of documentation	Archiving of documentation: <ul style="list-style-type: none"> • may be required to comply with legislative or regulatory requirements, and/or with organisational policy • should include an indexing system that specifies the period for which the document is to be retained • should comply with relevant requirements regarding physical storage and security
Distribution control	Distribution control may consist of: <ul style="list-style-type: none"> • a listing of recipients of each type of document and, where required, a document tracking system
<ul style="list-style-type: none"> • External standards, requirements and conventions 	External standards, requirements and conventions may include: <ul style="list-style-type: none"> • ISO900 requirements • AGPS Style manual • engineering and other technical standards • drawing standards • organisational style/marketing guides • documentation requirements of suppliers, customers and regulatory agencies

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS405070A Develop and manage sustainable energy practices

Modification History

New unit, superseding MSACMT670A Develop and manage sustainable energy practices - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to identify opportunities for, and make improvements in, sustainable energy practices in an organisation. Areas covered include efficient use of raw materials, management of waste, electricity conservation, heat conservation and management, water management, environment protection and environment obligations of enterprises.

Application of the Unit

This unit applies to an individual who is required to establish systems for improved energy practices in an organisation. The unit involves analysis of energy used in processes and operations and categorising the energy use according to lean principles. The unit covers categorising energy into necessary use and waste with the waste being further categorised into necessary waste and unnecessary waste. Strategies for eliminating or minimising energy waste are covered with benefit/cost analyses being required for strategies.

This unit primarily requires the application of communication and problem solving skills associated with collecting and analysing information. An ability to analyse energy use of technology or processes will be applied. Initiative and enterprise, and planning and organising are also required to develop plans for efficient energy use. This unit also requires aspects of self-management and learning to ensure feedback and new learning is integrated into the development of processes.

Where the quantum of energy used is not easily available or a formal calculation of energy use is required through an energy balancing calculation (e.g. for regulatory purposes) the unit *MSS015011A Conduct a sustainability energy audit* may also be required.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Analyse energy use	1.1	Identify all energy consuming processes
		1.2	Determine quantity and nature of energy consumed
		1.3	Analyse energy consumed and generated in different parts of the process
		1.4	Determine source of energy consumed in process
2	Develop energy conservation plans	2.1	Determine the efficiency of use of energy by all energy consuming processes
		2.2	Determine causes of low efficiency of use
		2.3	Develop plans for increasing the efficiency of energy use
		2.4	Determine benefit/cost of plans
3	Develop energy trading plans	3.1	Compare energy generating activities with energy consuming activities
		3.2	Determine feasibility of energy consuming activities using energy generated by other activities

		3.3	Develop plans for energy trading
		3.4	Determine benefit/cost of plans
4	Investigate alternative sources of energy	4.1	Develop a specification for energy required
		4.2	Identify a range of sources for that energy
		4.3	Determine benefit/cost for alternative energy sources
5	Develop plans for more efficient energy use	5.1	Compare benefit/costs for different alternatives developed
		5.2	Rank proposals based on benefit/cost compare to limited resources
		5.3	Check proposals meet regulatory requirements
		5.4	Recommend proposals for improving energy efficiency
6	Implement selected plans	6.1	Liaise with relevant people to implement energy efficiency plans
		6.2	Follow through to ensure implementation occurs
		6.3	Monitor implementation and make adjustments, as required
		6.4	Check new energy usage to ensure improvements have occurred

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- using common units, symbols and formulae common in energy-related calculations
- applying mathematics

- communicating with a variety of groups and individuals using different media
- solving complex problems individually and as part of a team
- reviewing range of existing data for suitability and determining where new data gathering is required
- planning and organising complex whole of organisation activities relating to energy use, including objectives, timelines, implementation procedures and monitoring strategy
- determining where energy balancing techniques are required
- accessing manufacturers' data and other sources of energy consumption for individual equipment and processes
- mapping processes and energy flows
- calculating, manipulating and interpreting numerical data
- ranking energy consumption and waste for area, sites or processes
- calculating the efficiency of use of energy by equipment and processes
- consulting with technical and operative staff on possible non-obvious energy wastes
- consulting and negotiating with stakeholders on implementation process for sustainability improvement

Required knowledge

Required knowledge includes:

- types and sources of energy
- methods of analysing energy efficiency for different types of energy
- methods of converting energy values from one form to another
- alternative sources of energy
- principles of energy efficiency
- relevant regulatory/legislative requirements
- energy trading schemes and procedures
- organisation and process needs for energy

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of their ability to:</p> <ul style="list-style-type: none"> • gather appropriate data to allow energy analyses • categorise energy use into necessary use and waste • develop options for energy reduction including
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	<p>presenting of alternatives and benefit/cost analyses</p> <ul style="list-style-type: none"> • develop strategies and plans for energy use and monitor implementation.
Context of and specific resources for assessment	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
Method of assessment	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Competitive systems and practices</p>	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise
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	<ul style="list-style-type: none"> the work organisation, culture, regulatory environment and the industry sector
Waste	<p>Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product.</p> <p>Within operations, categories of waste include:</p> <ul style="list-style-type: none"> excess production and early production delays movement and transport poor process design inventory inefficient performance of a process making defective items activities which do not yield any benefit to the organisation or any benefit to the organisations customers
Necessary waste	<p>Necessary waste is:</p> <ul style="list-style-type: none"> any activity or cost which does not contribute directly to customer benefit/feature in the product, and which cannot be avoided (e.g. regulatory compliance and fixed costs). Necessary waste cannot be eliminated but should be managed
Unnecessary waste	<p>Unnecessary waste is:</p> <ul style="list-style-type: none"> any activity or cost which does not contribute directly to customer benefit/features in the product and can be avoided. Unnecessary waste should be eliminated as quickly as practical
Energy	<p>Energy includes:</p> <ul style="list-style-type: none"> all sources of energy used by the process be it electricity, gas or mobile transport fuel <p>The uses of the energy will also be potentially wide and include:</p> <ul style="list-style-type: none"> heating and cooling moving materials (e.g. pumps and conveyors) modifying materials (e.g. cutting, forming, weaving, knitting, reacting, moulding, extruding and mixing) generating pressure/vacuum or providing motive power for equipment and transport
Energy trading	<p>Energy trading means both formal trading where the organisation investigates alternatives to:</p>

	<ul style="list-style-type: none">• the buying of energy through alternative suppliers and tender processes• selling of excess energy produced by the organisation to energy companies or other producers and <ul style="list-style-type: none">• internal trading of excess energy from one area to an energy consuming area elsewhere in the organisation
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Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

MSS405075A Facilitate the development of a new product

Modification History

Release 2 - Content error in Range and Evidence Guide corrected. Prerequisite unit code corrected - MSS404052A

Release 1 - New unit, superseding MSACMT675A Facilitate the development of a new product* - Equivalent

* New prerequisite *MSS404052A Apply statistics to operational processes* superseding MSACMT452A Apply statistics to processes in manufacturing

Unit Descriptor

This unit of competency covers the skills and knowledge required to facilitate the development of a new or evolutionary product within an existing range of products and encompasses design for manufacture, determining the process capability and the facilitation of its initial production.

Application of the Unit

This competency applies to an individual responsible for the development of a new product. The unit assumes an initial product design has been prepared by a designer and also assumes a working knowledge of all main processes and materials so that an informed choice can be made between them. The person will normally be a manager or technical expert and be required to work closely with a range of other management and operations personnel.

The unit requires balancing the business and technical sides of the new product and would typically be done as part of a cross-functional team. This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information and consulting with stakeholders. Teamwork, problem solving, initiative and enterprise, and planning and organising are required to facilitate the development of a new product. This unit also requires aspects of self-management and learning to ensure feedback and new learning is integrated into competitive systems and practices.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MSS404052A Apply statistics to operational processes

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Confirm design brief of new product in consultation with relevant people	1.1	Review product design with customer and other key stakeholders and agree on technical specification, aesthetic requirements, timelines, cost and other market requirements
		1.2	Determine any regulatory, industry code/intellectual property requirements for product
		1.3	Identify any required tooling, process or equipment needs
		1.4	Confirm design brief, including relevant drawings, to meet needs
		1.5	Determine design brief conforms to organisation objectives and capability
		1.6	Obtain approval on total design brief from all relevant personnel
2	Determine material requirements for product	2.1	Select appropriate materials or combination of materials/components in liaison with key stakeholders
		2.2	Determine material/component testing and evaluation regime required to meet product end use requirements,

- including regulatory/industry code requirements
- 2.3 Arrange for testing and evaluation of trial materials/components
 - 2.4 Guide material trial process and interpret material trial results
 - 2.5 Determine final materials/components specifications and details of value chain
- 3 Determine process requirements for product
 - 3.1 Select appropriate process to make product in liaison with key stakeholders and based on relevant factors
 - 3.2 Determine any special process/equipment requirements for this product
 - 3.3 Communicate with production personnel to determine any concerns and/or training or other needs
 - 3.4 Adjust the design, as required, to satisfy customer and production needs
- 4 Ensure process needs for new product have been met
 - 4.1 Liaise with equipment design/procurement personnel
 - 4.2 Interpret hardware specifications and ensure they are appropriate for the job required
 - 4.3 Liaise with process personnel to ensure appropriate draft procedures for new product have been developed
 - 4.4 Validate product cost and design meets organisation requirements and capability
- 5 Trial new product through the process
 - 5.1 Design trialing procedure to deliver required information
 - 5.2 Liaise with relevant stakeholders
 - 5.3 Ensure health safety and environment (HSE) requirements are observed
 - 5.4 Coordinate the trialling of the new product
 - 5.5 Interpret product trial results and guide product trial

- process
- 5.6 Tune process to optimise production of new product
- 6 Determine process capability
- 6.1 Plot appropriate statistical process control charts
- 6.2 Determine confidence limits
- 6.3 Compare confidence limits with product specification
- 7 Coordinate product trials
- 7.1 Determine product testing and evaluation regime required to meet end use requirements, including regulatory/industry code requirements
- 7.2 Arrange for testing and evaluation of trial product/prototype
- 7.3 Interpret product trial results and guide product trial process
- 7.4 Determine final product specification in liaison with key stakeholders
- 7.5 Make required changes to materials, process and equipment
- 8 Implement standard procedures for new product
- 8.1 Monitor initial production and, in liaison with appropriate team members, adjust process, conditions and materials to ensure the product and process outcomes conform to customer, regulatory and organisation requirements
- 8.2 Ensure process specifications are updated and reflect the optimised operation developed
- 8.3 Ensure standard operating procedures are correct for the new product
- 8.4 Ensure equipment and other hardware records are updated to reflect additions/changes
- 8.5 Ensure project records are complete and all required reports have been completed and submitted

8.6 Archive records according to company procedure

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- selecting and justifying the selection of:
 - type of material/material specification
 - appropriate process for a range of product/market applications
 - material and product testing procedures
- applying theoretical principles to predict:
 - properties of product based on materials selected
- identifying effects of processes and processing on the final properties of the product mathematically determine:
 - product cost estimates
 - process time
 - cost/benefit to organisation of new product
- communicating at all levels in the organisation and value stream and to audiences of different levels of literacy and numeracy
- interpreting and making recommendations based on:
 - field test results
 - market analysis data
 - trialling data
 - organisation objectives and business plan
 - equipment and operations capacity

Required knowledge

Required knowledge includes:

- materials, equipment and process sufficient to choose an appropriate combination of materials and process to achieve the end use function of the product
- enterprise procedures and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards

Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of their ability to:</p> <ul style="list-style-type: none"> • ensure the development of a new product meets general organisation guidelines and objectives • liaise with the required people • optimise the process for the new product at the completion of the development phase • assess materials and components characteristics required in a design including material grades and properties and the effects of processing on materials and components • use trial outcomes to determine standard procedures for manufacture and/or operation of new product.
<p>Context of and specific resources for assessment</p>	<p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
<p>Method of assessment</p>	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of

	<p>contingencies, improvement scenarios, and so on)</p> <ul style="list-style-type: none"> • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p>
Guidance information for assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	<p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S
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	<ul style="list-style-type: none"> • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Organisation objectives and requirements	<p>Organisation objectives and requirements may include:</p> <ul style="list-style-type: none"> • Board or management guidelines on: <ul style="list-style-type: none"> • cost/profit requirements for new products (e.g. minimum return and capital expenditure limits) • encouragement/discouragement of different types of products (e.g. on sustainability, ethical or other non-individual customer related criteria) • potential or actual capacity conflicts with other customers or product/process activities • activities that require/may require community consultation (e.g. on noise or other environmental grounds)
Tools and equipment	<p>Tools and equipment may include:</p> <ul style="list-style-type: none"> • understanding of use of all standard processing equipment • relevant personal protective equipment
Typical regulatory requirements	<p>Typical regulatory requirements may include:</p> <ul style="list-style-type: none"> • occupational health and safety (OHS) • environmental regulations • structural codes • product/industry specific requirements
Typical problems	<p>Typical problems may include:</p> <ul style="list-style-type: none"> • defining product end-use requirements in terms

	<p>meaningful to the product design and manufacture</p> <ul style="list-style-type: none"> • matching suitable materials and processes to the product needs and company expertise and facilities • matching (and improving) process capability to product tolerances
Relevant factors	<p>Relevant factors may include:</p> <ul style="list-style-type: none"> • type of material • dimensional precision of product • length of run/number of products • required aesthetics • size and complexity of product • available capital funding • process equipment available • HSE factors

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.

PSPGOV521A Collect statistical data

Modification History

Release	TP Version	Comments
3	PSP12V1	Unit descriptor edited.
2	PSP04V4.2	Layout adjusted. No changes to content.
1	PSP04V4.1	Primary release.

Unit Descriptor

This unit covers the process of developing a data collection plan and then collecting new data. It includes preparing for data collection, defining data requirements, preparing data collection tools for direct collection, conducting data collection using direct collection, conducting data collection from existing source/s and collating and organising information/data.

In practice, collecting statistical data may overlap with other generalist or specialist public sector work activities such as acting ethically, complying with legislation, providing client service, working safely, managing a project, undertaking research and analysis, etc.

This is one of 5 units of competency in the *Working in Government Competency Field* that deal with statistics. Related units are:

- PSPGOV520A Scope statistical data collection
- PSPGOV522A Process statistical data
- PSPGOV523A Interrogate and analyse statistical data
- PSPGOV524A Interpret data and related statistics
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- No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements are the essential outcomes of the unit of competency. Together, performance criteria specify the requirements for competent performance. Text in *bold italics* is explained in the Range Statement following.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for data collection	<p>1.1 The project/survey question is studied and where necessary clarified.</p> <p>1.2 <i>Expected data outputs</i> are defined in accordance with the project scope.</p> <p>1.3 Proposed technology is familiarised and customised where necessary.</p> <p>1.4 The population for the source of data is confirmed.</p> <p>1.5 The survey design (if necessary) is assessed for suitability.</p>
2. Define data requirements	<p>2.1 The accuracy requirements (precision) of the data to be collected are determined.</p> <p>2.2 The requirements of proposed information management system with regard to storage and processing of data are defined.</p> <p>2.3 Information requirements are defined and communicated to all staff involved in data collection.</p> <p>2.4 <i>Data sources</i> are identified and assessed for accessibility and reliability</p> <p>2.5 The type and extent of data required is defined.</p> <p>2.6 <i>Classification standards</i> are applied to the proposed data.</p>
3. Prepare data	<p>3.1 Data collection methods and techniques are clearly defined</p>

ELEMENT	PERFORMANCE CRITERIA
collection tools for direct collection	<p>relative to data requirements.</p> <p>3.2 The optimum method for gathering the proposed data is identified after research of alternatives has occurred.</p> <p>3.3 The <i>survey vehicle</i>/questionnaire is designed in conjunction with a suitably qualified person.</p> <p>3.4 The survey vehicle is tested and evaluated.</p>
4. Conduct data collection using direct collection	<p>4.1 The proposed <i>sampling</i> frame is identified and/or constructed.</p> <p>4.2 A sample is selected and a pilot study implemented.</p> <p>4.3 Re-evaluation of the proposed survey design is undertaken based on the results of the pilot study.</p> <p>4.4 The main survey is conducted according to accepted professional and/or organisational standards.</p> <p>4.5 Opportunities are taken to establish and maintain contacts with those who may provide useful information, with due consideration of respondent burden.</p>
5. Conduct data collection from existing source/s	<p>5.1 Data for the project is sourced.</p> <p>5.2 A range of statistics necessary for the project is identified in conjunction with a suitably qualified person.</p> <p>5.3 Sources of information are regularly reviewed for usefulness, reliability and cost.</p> <p>5.4 Channels and sources of information are used effectively in accordance with organisational standards.</p>
6. Collate and organise information/data	<p>6.1 Statistics are identified to support the project question.</p> <p>6.2 Data is researched and/or collated from sources in accordance with <i>legislation, policy and guidelines</i>.</p> <p>6.3 Data is collated electronically.</p> <p>6.4 The accuracy and appropriateness of data are evaluated.</p> <p>6.5 Data is recorded in the desired format in accordance with professional, organisational and project requirements.</p>

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Skill requirements

Look for evidence that confirms skills in:

- applying legislation, regulations and policies relating to statistical data collection

- deciding which survey method to use
- designing questionnaires
- using a range of communication methods including consultation, establishing and maintaining contacts
- reading information and data requirements
- writing survey questions that are unambiguous and reflect intended meaning
- responding to diversity, including gender and disability
- applying procedures relating to occupational health and safety and environment in the context of statistical data collection

Knowledge requirements

Look for evidence that confirms knowledge and understanding of:

- legislation, regulations, policies, procedures and guidelines relating to statistical data collection
- legislation and policies governing privacy and confidentiality
- the advantages and disadvantages of different data sources
- the differences between census and survey data
- the importance of identifying a good frame
- the quality of the statistics and for what purpose the data can be used
- the limitations of the statistics used
- different data collection methodologies and how they affect results
- data collection and sampling methodologies
- the effects of non-response on survey estimates
- the impact of types of errors
- national and international classification standards
- information management systems
- equal employment opportunity, equity and diversity principles
- public sector legislation such as occupational health and safety and environment in the context of statistical data collection

Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the Unit descriptor, Performance Criteria, the Range Statement and the Assessment Guidelines for the Public Sector Training Package.

Units to be assessed together

- *Pre-requisite* units that must be achieved prior to this unit: *Nil*
- *Co-requisite* units that must be assessed with this unit: *Nil*
- *Co-assessed units* that may be assessed with this unit to increase the efficiency and realism of the assessment process include, but are not limited to:

- PSPETHC501B Promote the values and ethos of public service
- PSPGOV503B Coordinate resource allocation and usage
- PSPGOV504B Undertake research and analysis
- PSPGOV520A Scope statistical data collection
- PSPGOV522A Process statistical data
- PSPGOV523A Interrogate and analyse statistical data
- PSPGOV524A Interpret data and related statistics
- PSPLEGN501B Promote compliance with legislation in the public sector
- PSPPM502B Manage complex projects

Overview of evidence requirements

In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms:

- the knowledge requirements of this unit
- the skill requirements of this unit
- application of Employability Skills as they relate to this unit
- collection of statistical data in a range of (3 or more) contexts (or occasions, over time)

Resources required to carry out assessment

These resources include:

- legislation, policy, procedures and protocols relating to the collection of statistical data
- case studies and workplace scenarios to capture the range of situations likely to be encountered when collecting statistical data

Where and how to assess evidence

Valid assessment of this unit requires:

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when collecting statistical data, including coping with difficulties, irregularities and breakdowns in routine
- collection of statistical data in a range of (3 or more) contexts (or occasions, over time) where contexts may include data collection via both primary and secondary sources.

Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:

- people with disabilities
- people from culturally and linguistically diverse backgrounds
- Aboriginal and Torres Strait Islander people
- women
- young people
- older people
- people in rural and remote locations.

Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination of 2 or more of:

- case studies
- demonstration
- portfolios
- projects
- questioning
- scenarios
- authenticated evidence from the workplace and/or training courses

For consistency of assessment

Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments

Range Statement

The Range Statement provides information about the context in which the unit of competency is carried out. The variables cater for differences between States and Territories and the Commonwealth, and between organisations and workplaces. They allow for different work requirements, work practices and knowledge. The Range Statement also provides a focus for assessment. It relates to the unit as a whole. Text in *bold italics* in the Performance Criteria is explained here.

<i>Expected data outputs</i> may include:	<ul style="list-style-type: none"> • variable names • attributes
<i>Data sources</i> may include:	<ul style="list-style-type: none"> • Australian Bureau of Statistics data • government agency sources
<i>Classification standards</i> may include:	<ul style="list-style-type: none"> • national and international definitions for collating and coding information
<i>Survey vehicle</i> may include:	<ul style="list-style-type: none"> • opinion polls • mail-out questionnaires • computer-aided telephone interviewing (CATI) • face-to-face interviews
<i>Sampling methods</i> may include:	<ul style="list-style-type: none"> • simple random sampling • systematic sampling • multi stage sampling
<i>Legislation, policy and guidelines</i> may include:	<ul style="list-style-type: none"> • State/Territory and Commonwealth legislation and regulations such as:

	<ul style="list-style-type: none">• public sector management acts• financial management acts• privacy legislation• equal employment opportunity and anti-discrimination legislation• occupational health and safety legislation• ethics and accountability standards• public sector standards• risk management standards• fraud control standards• government security standards• knowledge management standards• organisational policy, procedures and protocols
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Unit Sector(s)

Not applicable.

Competency field

Working in Government.

PSPPOL603A Manage policy implementation

Modification History

Release	TP Version	Comments
3	PSP12V1	Unit descriptor edited.
2	PSP04V4.2.	Layout adjusted. No changes to content.
1	PSP04V4.1	Primary release.

Unit Descriptor

This unit covers the interpretation of policy and the management of the policy implementation process. It includes interpreting and communicating the requirements of policy, and policy implementation.

In practice, the management of policy implementation occurs in the context of other generalist and specialist work activities such as managing change, managing diversity, managing workplace safety, managing the delivery of client services, managing risk, directing the management of contracts.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements are the essential outcomes of the unit of competency. Together, performance criteria specify the requirements for competent performance. Text in *bold italics* is explained in the Range Statement following.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Interpret and communicate requirements of policy	1.1 The expected outcomes of policy implementation are identified and explained to staff in a manner suited to their levels of understanding, experience and <i>specific needs</i> .
	1.2 <i>Policy</i> is interpreted relative to workplace responsibilities and accountabilities.
	1.3 The impact on <i>work activities</i> of policy implementation is communicated to staff.
	1.4 Staff are assisted with the interpretation of policy and its application to their work.
	1.5 Policy and its implications are explained to other stakeholders using language and materials to suit their current level of knowledge, experience and specific needs.
2. Implement policy	2.1 Potential or impending policy changes are identified and strategies are prepared to accommodate and communicate those changes
	2.2 Work plans are prepared in consultation with staff and management to ensure that policy is implemented as intended.
	2.3 Staff performance is monitored to ensure that it complies with policy and corrective action is taken as necessary.
	2.4 Staff are assisted in adjusting to changes in accordance with their needs and experience.

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Skill requirements

Look for evidence that confirms skills in:

- interpreting complex and formal documents such as policy and legislation, and assisting others to apply them in the workplace
- using communication to suit different audiences
- responding to diversity, including gender and disability
- accessing legislation and codes of ethics electronically or in hard copy
- preparing work plans requiring attention to detail and the interpretation and application of complex language and/or concepts
- providing leadership to the workgroup in the interpretation and implementation of policy
- identifying and addressing the environmental and occupational health and safety implications of the policy/s to be implemented

Knowledge requirements

Look for evidence that confirms knowledge and understanding of:

- range and type of policies relating to the public sector
- public sector code/s of ethics and code/s of conduct
- organisation and government procedures
- equal employment opportunity, equity and diversity principles
- environmental and occupational health and safety implications of policy/s being implemented

Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the Unit descriptor, Performance Criteria, the Range Statement and the Assessment Guidelines for the Public Sector Training Package.

Units to be assessed together

- *Pre -requisite* units that must be achieved prior to this unit: *Nil*
- *Co -requisite* units that must be assessed with this unit: *Nil*
- *Co -assessed units* that may be assessed with this unit to increase the efficiency and realism of the assessment process include, but are not limited to:
 - PSPMNGT604B Manage change
 - PSPMNGT605B Manage diversity
 - PSPMNGT606B Manage quality client service
 - PSPMNGT608B Manage risk

- PSPOHS602A Manage workplace safety
- PSPPROC602B Direct the management of contracts

Overview of evidence requirements

In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms:

- the knowledge requirements of this unit
- the skill requirements of this unit
- application of the Employability Skills as they relate to this unit (see Employability Summaries in Qualifications Framework)
- management of policy implementation in a range of (2 or more) contexts (or occasions, over time)

Resources required to carry out assessment

These resources include:

- relevant policy and legislation
- public sector standards, procedures and protocols
- policy guidelines

Where and how to assess evidence

Valid assessment of this unit requires:

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when managing the implementation of policy, including coping with difficulties, irregularities and breakdowns in routine
- management of policy implementation in a range of (2 or more) contexts (or occasions, over time)

Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:

- people with disabilities
- people from culturally and linguistically diverse backgrounds
- Aboriginal and Torres Strait Islander people
- women
- young people
- older people
- people in rural and remote locations

Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination of 2 or more of:

- case studies
- portfolios
- projects

- questioning
- scenarios
- authenticated evidence from the workplace and/or training courses

For consistency of assessment

Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments

Range Statement

The Range Statement provides information about the context in which the unit of competency is carried out. The variables cater for differences between States and Territories and the Commonwealth, and between organisations and workplaces. They allow for different work requirements, work practices and knowledge. The Range Statement also provides a focus for assessment. It relates to the unit as a whole. Text in ***bold italics*** in the Performance Criteria is explained here.

Specific needs may include:

- educational level
- preferred language
- literacy or numeracy
- cultural background
- ethnicity
- gender
- preferred interpersonal approach
- physical ability
- thinking/learning styles
- work experience
- working styles

Policy may include:

- government policy
- organisation policy

Work activities may include:

- processes
- outcomes
- priorities
- client services
- core business
- service delivery mode/s
- organisational structure

Unit Sector(s)

Not applicable.

Competency field

Policy.

PSPREG603A Manage and lead inspection and monitoring programs

Modification History

Release	TP Version	Comments
3	PSP12V1	Unit descriptor edited.
2	PSP04V4.2.	Layout adjusted. No changes to content.
1	PSP04V4.1	Primary release.

Unit Descriptor

This unit covers the requirements to manage and lead inspection and monitoring activities in accordance with relevant Acts and regulations.

Typically work is at an experienced, self-directed level with responsibility for outputs and quality improvement. It includes determining inspection and monitoring program requirements, managing and leading inspection and monitoring programs, and managing reporting systems, information and training.

In practice, managing and leading inspection and monitoring programs may overlap with other generalist or specialist public sector workplace activities such as managing compliance with legislation, managing diversity, managing risk, networking, implementing policy, managing client service, managing resources, etc.

This unit is one of five units in the *Regulatory Competency* field that deal with inspection and monitoring. Related units are:

PSPREG201A Carry out inspections and monitoring under guidance

PSPREG301A Undertake routine inspections and monitoring

PSPREG413A Undertake inspections and monitoring

PSPREG503A Supervise and carry out complex inspection

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements are the essential outcomes of the unit of competency. Together, performance criteria specify the requirements for competent performance. Text in *bold italics* is explained in the Range Statement following.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine inspection and monitoring program requirements	<p>1.1 Outputs and performance indicators for programs, and <i>inspection and monitoring</i> responsibilities are determined in accordance with organisational requirements.</p> <p>1.2 Strategic, operational, technical, financial and administrative requirements are determined in accordance with organisational and task requirements.</p> <p>1.3 Operational and procedural assessments are undertaken in accordance with organisational policy and procedures and recommendations are made for quality improvement.</p> <p>1.4 <i>Legislation</i> and regulations are interpreted and recommendations are made on related policies and procedures.</p> <p>1.5 Risk management practices, occupational health and safety and environmental requirements are interpreted and explained to staff in accordance with their needs.</p>
2. Manage and lead inspection and	<p>2.1 Leadership is provided and <i>individuals</i> are assisted to deliver agreed outputs in accordance with the organisation's business</p>

ELEMENT	PERFORMANCE CRITERIA
monitoring programs	<p>requirements.</p> <p>2.2 <i>Inspection and monitoring</i> programs are managed and program performance, resources and expenditure are supervised in accordance with organisational requirements.</p> <p>2.3 Policy and procedures are developed for dealing with non-compliance through information, development/extension activities and prosecution in accordance with organisational requirements.</p> <p>2.4 <i>Compliance programs</i> are managed as required in accordance with set procedures and timelines.</p> <p>2.5 Implementation of the performance management system for inspection/monitoring staff is managed in accordance with organisational policies and procedures.</p> <p>2.6 Legislative requirements, risk management practices, occupational health and safety and environmental procedures are enforced in accordance with organisational requirements.</p>
3. Manage reporting systems, information and training	<p>3.1 <i>Records</i> management and reporting systems are managed in accordance with organisational policy and performance indicators.</p> <p>3.2 <i>High-level correspondence and advice</i>, submissions and reports are prepared in accordance with organisational requirements.</p> <p>3.3 Evidence is prepared in accordance with organisational policy and procedures for legal action under relevant legislation.</p> <p>3.4 Inspection/monitoring training is monitored and initiatives to improve staff performance are developed and implemented in accordance with organisational requirements.</p>

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Skill requirements

Look for evidence that confirms skills in:

- demonstrating leadership and performance management in the context of inspection and monitoring
- undertaking risk management and problem solving
- communicating with a diverse range of clients and staff
- responding to diversity, including gender and disability

- writing reports, submissions and Ministerial correspondence, requiring discretion and judgment to determine content and style audience approach
- dealing with referrals from other staff on matters that are more difficult, or of potential interest to external parties such as the media, public, political parties etc
- using computers for word processing and records management
- applying public sector legislation such as occupational health and safety and environment in the context of inspection and monitoring

Knowledge requirements

Look for evidence that confirms knowledge and understanding of:

- interpretation, application, evaluation and review of enabling legislation and regulations
- performance and procedural assessment strategies
- performance indicators
- organisational policy and procedures
- inspection procedures
- monitoring procedures
- responses to complex/serious non-compliance
- elements of an offence
- rules of evidence
- equity and diversity principles
- workplace and industry environment
- public sector legislation including occupational health and safety, environment, privacy etc

Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the Unit descriptor, Performance Criteria, the Range Statement and the Assessment Guidelines for the Public Sector Training Package.

Units to be assessed together

- *Pre-requisite* units that must be achieved prior to this unit:*Nil*
- *Co-requisite* units that must be assessed with this unit:*Nil*
- *Co-assessed units* that may be assessed with this unit to increase the efficiency and realism of the assessment process include, but are not limited to:
 - PSPETHC601B Maintain and enhance confidence in public service
 - PSPLEGN601B Manage compliance with legislation in

the public sector

- PSPGOV602B Establish and maintain strategic networks
- PSPMNGT602B Manage resources
- PSPMNGT605B Manage diversity
- PSPMNGT606B Manage quality client service
- PSPMNGT608B Manage risk
- PSPPOL603A Manage policy implementation
- PSPREG601B Manage regulatory compliance
- PSPREG602B Evaluate regulatory compliance

Overview of evidence requirements

In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms:

- the knowledge requirements of this unit
- the skill requirements of this unit
- application of the Employability Skills as they relate to this unit (see Employability Summaries in Qualifications Framework)
- performance at an experienced, self-directed level in managing and leading inspection and monitoring programs undertaken in a range of (3 or more) contexts (or occasions, over time)

Resources required to carry out assessment

These resources include:

- legislation, policy, procedures and protocols relating to inspection and monitoring
- case studies and workplace scenarios to capture the range of situations likely to be encountered when managing and leading inspection and monitoring programs

Where and how to assess evidence

Valid assessment of this unit requires:

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when managing and leading inspection and monitoring programs, including coping with difficulties, irregularities and breakdowns in routine
- performance at an experienced, self-directed level in managing and leading inspection and monitoring programs undertaken in a range of (3 or more) contexts (or occasions, over time)

Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:

- people with disabilities
- people from culturally and linguistically diverse backgrounds

- Aboriginal and Torres Strait Islander people
- women
- young people
- older people
- people in rural and remote locations

Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination of 2 or more of:

- case studies
- portfolios
- questioning
- scenarios
- authenticated evidence from the workplace and/or training courses

For consistency of assessment

Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments

Range Statement

The Range Statement provides information about the context in which the unit of competency is carried out. The variables cater for differences between States and Territories and the Commonwealth, and between organisations and workplaces. They allow for different work requirements, work practices and knowledge. The Range Statement also provides a focus for assessment. It relates to the unit as a whole. Text in ***bold italics*** in the Performance Criteria is explained here.

Inspection and monitoring

may include:

- inspections/examinations
- monitoring
- surveillance
- audits
- remote monitoring
- other compliance assurance activities

Legislation may include:

- Commonwealth legislation and regulations, for example:
 - Commonwealth Quarantine Act 1908, proclamations and regulations
 - Crimes Act 1914 and Criminal Code Act 1995
 - Customs Act 1901 and regulations
 - Wildlife Protection Act 1982
 - Export Control Act 1982

- Imported Foods Act 1996
- Occupational Health and Safety Act 1988
- State, Territory and Local Government legislation and regulations, such as those relating to:
 - agriculture
 - horticulture
 - conservation and land management
 - fisheries
 - environmental protection
 - building
 - water
 - emergencies
 - international legislation/codes of behaviour

Individuals may include:

- inspection/monitoring staff
- other supervised staff
- contract workers
- consultants
- service providers
- super-ordinates
- clients
- members of the industry
- members of the public
- personnel from other government departments

Inspection and monitoring activities may relate to:

- aircraft
- airfreight
- animal products
- animals
- cargo
- cereals
- collection of biological specimens
- disposal of organic waste
- fresh produce
- goods
- land condition, such as:
 - topography
 - salinity
 - erosion
 - weed infestation
 - vermin infestation

- fire hazard
- over grazing
- land improvements, such as:
 - fences
 - buildings
 - sporting or playground equipment
 - irrigation infrastructure
 - sewerage infrastructure
 - waterfront occupations
 - community structures
 - land usage
- leases and other tenures, to ensure compliance with conditions
- licence/permit compliance (e.g. vegetation clearing)
- live fish
- livestock
- mail
- mineral samples
- passenger baggage
- people
- pests
- plant products
- plants
- premises
- properties
- reserves and their use/s
- survey activities to maintain readiness for district emergency plans
- vector monitoring
- vessels
- audit
- monitoring
- treatment
- containment
- control
- eradication
- destruction
- notes
- case files

Compliance programs
may include:

Records may include:

***High-level
correspondence and
advice*** may include:

- statistics
- forms (application forms, disease notification forms)
- notices (seizure notice, infringement notice)
- invoices
- receipts
- input to policy reviews
- input to legislation/regulations
- support to senior management
- Ministerials

Unit Sector(s)

Not applicable.

Competency field

Regulatory.

PUACOM012B Liaise with media at a local level

Modification History

Release	TP Version	Comments
3	PUA12 V2.1	Editorial changes.
2	PUA12 V2	Layout adjusted. Application added.
1	PUA00 V8.1	Primary release.

Unit Descriptor

This unit covers the liaison with media at a low level incident and providing information about local events.

Application of the Unit

This unit applies to workers of local public safety groups who are delegated the responsibility to liaise with media in both emergency and non-emergency situations.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of

performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine media requirements	<p>1.1 <i>Organisational protocols</i> are followed when <i>liaising with the media</i>.</p> <p>1.2 The media's potential interest is assessed and arrangements are made to meet needs where appropriate.</p> <p>1.3 <i>Operational responsibilities</i> are balanced against the provision of information to the <i>media</i>.</p>
2. Provide information to the media	<p>2.1 A positive image of the <i>organisation</i> is maintained when liaising with the media.</p> <p>2.2 Every opportunity is used to promote the organisation, its services and personnel.</p> <p>2.3 <i>Relevant and succinct information</i> is supplied to media when operational responsibilities are under control and when organisational representative is available to talk to the media.</p>
3. Publicise an event	<p>3.1 Relationship is established with media contacts.</p> <p>3.2 <i>Event</i> details and support materials are gathered and presented in a logical, relevant and concise manner to the media.</p> <p>3.3 Information provided to media is recorded and maintained.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- attention to detail
- communicating facts in a fluent, clear and interesting manner
- empathy with victims and operational personnel
- liaison with media and other organisation personnel
- media presentation
- prioritisation between operational responsibilities and provision of information to

media

- public speaking
- retaining professionalism under duress

Required Knowledge

- organisational protocols relating to media liaison, for example legal and organisation requirements relating to:
 - confidentiality
 - libel
 - accuracy
 - discrimination
- role of media in disseminating information
- requirements of media to present information in a newsworthy/informative manner
- requirements of different media:
 - newspapers
 - magazines
 - radio
 - television (local, regional, national media)
- communication skills
- establishing media relationship

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence be demonstrated in providing information to media whilst managing operational responsibilities.

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

On the job or in a simulated work environment.

Specific resources for assessment

No special requirements.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Organisation*** may include
- Fire
 - Police
 - State Emergency Service
 - Emergency Management

- Organisational protocols*** may include
- organisational policies and procedures
 - personal presentation being as neat as possible considering the operational circumstances
 - ensuring media liaison person is fully briefed and prepared
 - acknowledge support of other organisations
 - seeking advice from headquarters where appropriate
 - limiting comments on role of own service
 - relevant Federal and State legislation and regulations

- Liaising with the media*** may include
- print (local, community, daily newspapers, magazines)
 - television (live or pre-recorded)
 - radio (live or pre-recorded)

- Operational responsibilities*** may include
- preservation of life and property, which is the principal concern to all public safety personnel
 - presenting information relevant to the public

- Event*** may include
- long service to organisation
 - medal presentation
 - awarding of certificates
 - donations/sponsorships/fundraising
 - recruiting
 - new equipment
 - VIP visit
 - open day
 - training
 - unusual rescues
 - self help information

- Media's potential interest*** may include:
- enormous media event
 - standard report
 - human interest
 - in the public's interest

- Media's requirements*** may include:
- deadlines
 - capabilities

- visual and verbal requirements
- types of medium
- variation
- journalists
- amenities
- briefing area
- access to media liaison person
- bilingual personnel and bilingual information

Media may include:

- representatives from mainstream, community and ethnic television
- print and broadcast media

Organisational positive image may include:

- promote the relevance and efficiency of the service
- report the facts
- heroism of personnel
- organisational personnel are co-operative and responsive
- organisational personnel well presented
- handling media in most positive manner in even the most adverse conditions/circumstances

Media opportunity may include:

- opportunity to promote the services
- provide educational information to the public
- airplay

Relevant and succinct information may include:

- information that according to protocol is available for public release
- report facts and avoid speculation
- do not supply classified information
- use language that can be readily understood by all to avoid misinterpretation

Unit Sector(s)

Not applicable.

PUAEQU001B Prepare, maintain and test response equipment

Modification History

Release	TP version	Comments
3	PUA12 V2.1	Editorial changes.
2	PUA12 V1	Layout adjusted. Application and Evidence Guide revised.
1	PUA00 V8.1	Primary release on TGA.

Unit Descriptor

This unit covers the competency to inspect, maintain and test a range of equipment according to organisation's procedures.

Application of the Unit

This unit applies to workers who have either a primary role in the maintenance of equipment or are required to test and maintain equipment as part of an operational role.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR215 Prevent injury (Fire sector specific)

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit

Performance Criteria describe the required performance needed to demonstrate achievement of the element.

Where ***bold italicised*** text is used, further information is

of Competency.

detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Inspect response equipment	<p>1.1 Equipment is <i>inspected</i> in accordance with <i>organisation's procedures</i>.</p> <p>1.2 Missing parts are identified and reported according to organisation's procedures.</p> <p>1.3 Faulty or damaged equipment is reported and recorded in accordance with organisation's procedures.</p>
2. Test response equipment	<p>2.1 Equipment is tested according to approved procedures and is fit for purpose according to <i>organisation's standards</i>.</p> <p>2.2 Test results are <i>recorded</i> according to regulatory and organisation's requirements.</p> <p>2.3 Defective equipment and sub-standard performance is reported and recorded according to organisation's procedures.</p>
3. Clean, maintain and restow equipment	<p>3.1 Equipment is cleaned, maintained, assembled and stowed according to organisation's procedures.</p> <p>3.2 Equipment records are updated according to organisation's procedures.</p> <p>3.3 Equipment is recovered, restowed and made ready for future use.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- comply with material safety data sheets
- inspect equipment according to organisation's procedures
- safely use cleaning agents and chemicals
- service and clean equipment according to organisation's procedures
- test equipment according to organisation's procedures

Required Knowledge

- identification of equipment
- occupational health and safety policy relevant to the maintenance, servicing and testing of equipment
- organisation's policies and procedures concerning the use, testing, cleaning and servicing of response equipment
- relevant parts of environmental legislation relating to waste water run off/pollution
- safe working practices when maintaining, servicing and testing equipment

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence can be demonstrated in organisational procedures for inspection testing, cleaning and servicing of response equipment.

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Competency must be assessed in the context of applying organisation's procedures to equipment used in the workplace.

Specific resources for assessment

Access to relevant equipment is required.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Organisational procedures may include:

- regulatory requirements
- equipment manufacturer's specifications and procedures
- Australian Standards
- industry practices
- occupational health and safety requirements

Organisational procedures

may be specified in:

- maintenance schedules
- operational directives
- organisation's procedures
- manufacturer's manuals
- operations manuals
- quality system documentation
- induction documentation
- workplace notices
- operator's manual

Reporting/recording

procedures may include:

- Verbal
- record sheets or books
- computer data bases
- card systems
- microfiche systems
- maintenance schedules

Organisation's standards

may include:

- Australian Standards
- state/territory or federal standards
- industry standards
- manufacturer's procedures
- international standards

Response equipment may include:

- ropes
- hand tools
- hoses
- branches and nozzles
- ladders
- pumps
- rescue tools
- salvage tools
- protective clothing and equipment
- breathing apparatus
- forcible entry tools
- portable fire extinguishers
- drip torches
- maps
- powered equipment
- organisational specialist equipment
- chainsaws
- communications equipment
- knapsacks
- lighting equipment
- first aid equipment
- pumps

- equipment required to undertake specific function such as compressor, generator, hydraulic pump
- audible warning systems such as sirens, horns
- visual warning systems such as lights
- light crystal display signs
- Global Positioning Systems
- vehicle tracking systems
- navigational systems

Inspection may include:

- visual, auditory and tactile inspection to identify possible operational failure of motorised equipment or seizure or physical failure of equipment

Maintenance may include:

- lubrication checks
- pressure checks
- fuel and water checks
- flow rate checks
- sharpening
- cleaning
- flushing

Faulty/damaged equipment may include:

- inoperative
- not fit for purpose
- operates ineffectively
- defects
- anomalies
- not clean
- physical damage

Unit Sector(s)

Not applicable.

PUAFIR203B Respond to urban fire

Modification History

Release	TP Version	Comments
2	PUA12 V2	Unit Descriptor expanded Application of the Unit added Some Performance Criteria made more explicit Range statements revised Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency for responding to an urban fire where offensive and defensive strategies are used, when working as a member of a team, under direct supervision.

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

Application of the Unit

This unit applies to personnel who work as a member of a team. Work at this level is undertaken under direct supervision and instruction.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR207B Operate breathing apparatus open circuit

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

- | | |
|---|--|
| <p>1. Proceed to fire</p> | <p>1.1 Information received about the location and <i>type of fire</i> is recorded in accordance with organisational requirements.</p> <p>1.2 Appropriate <i>personal protective clothing and equipment</i> is donned in accordance with organisational procedures.</p> <p>1.3 Most effective route to the fire is identified.</p> |
| <p>2. Prepare extinguishing media and/or equipment for use</p> | <p>2.1 <i>Water supplies</i> at the incident to support firefighting are located.</p> <p>2.2 <i>Equipment</i> to access and supply water to the firefighting operations is identified and assembled in accordance with organisational procedures.</p> <p>2.3 Nominated <i>extinguishing media</i> and/or equipment is identified, obtained and/or accessed.</p> <p>2.4 Extinguishing media and equipment are used in accordance with manufacturers' specifications and organisational procedures.</p> |
| <p>3. Enter the structure</p> | <p>3.1 <i>Hazards</i> are identified, monitored and controlled in accordance with organisational procedures.</p> <p>3.2 Personal protective clothing selected is appropriate to the hazards.</p> <p>3.3 Organisational breathing apparatus (BA) procedures and safe work practices are followed.</p> <p>3.4 Structure is entered in accordance with organisational procedures and safety practices.</p> <p>3.5 Safe paths of access and egress are identified and maintained at all times.</p> <p>3.6 Life is protected and damage to property and the environment is minimised in accordance with organisational procedures.</p> |

4. **Conduct search and rescue**
 - 4.1 Systematic primary and secondary searches are conducted.
 - 4.2 Rooms are searched and marked in accordance with organisational procedures.
 - 4.3 Casualties are located, *assisted* and rescued in accordance with organisational procedures.
 - 4.4 Fatalities are located and protected in accordance with organisational procedures and relevant legislation.
 - 4.5 All persons are accounted for and information is communicated to Incident Controller.
5. **Combat fires**
 - 5.1 Personal safety is maintained at all times in accordance with organisational procedures and workplace health and safety guidelines.
 - 5.2 Organisational *firefighting objectives, strategies and tactics* are received, confirmed and implemented as directed.
 - 5.3 *Firefighting considerations* are taken into account when implementing tactics.
 - 5.4 Equipment and extinguishing media used to combat the fire are appropriate to the class of fire and support operational procedures.
 - 5.5 Firefighting equipment is positioned to achieve maximum effect in suppressing the fire, protecting exposures and preserving evidence of fire cause.
 - 5.6 Extinguishing media is applied using appropriate application techniques.
 - 5.7 Fire suppression techniques applied minimise hazards to occupants trapped or lost within the structure.
 - 5.8 Communications with other team members and supervisor are maintained throughout the incident.
6. **Observe and react to changes in conditions and fire behaviour**
 - 6.1 *Changing conditions at the fire* are observed and their effects on fire behaviour are noted and reported.
 - 6.2 *Evidence of changing conditions at the fire* are reported
 - 6.3 Firefighting tactics are adapted to meet changing conditions and fire behaviour.
7. **Participate in ancillary operations**
 - 7.1 *Ancillary activities* to complement firefighting operations and prevent further damage to the structure and its contents are undertaken.
 - 7.2 Water run off from fire is monitored and conditions

- reported to supervisor.
- 7.3 Risk and/or damage to the environment at the incident is minimised or avoided through appropriate firefighting and ancillary activities.
- 8. Conclude firefighting operations**
- 8.1 Firefighting equipment is collected and stowed at the incident.
- 8.2 Incident scene is made safe for the public.
- 8.3 Defective or missing equipment is identified and reported.
- 8.4 Assistance is given to complete and *record appropriate incident information.*

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- apply extinguishing media to the fire
- control fire environment by cooling fire gases
- implement search and rescue procedures
- move in smoke and darkness
- obtain water from reticulated/static water supplies
- operate a branch
- operate a fire extinguisher
- use BA and BA equipment
- use structural entry techniques

Required Knowledge

- BA procedures
- basic signs of fire cause and activities for protecting evidence
- behaviour of a building/structure in a fire
- extinguishing media
- fire behaviour
- fire ground signals (audible and visual)
- fire tetrahedron
- firefighting foams
- firefighting tactics, techniques, and procedures
- hazards
- identification of various building types including structural elements and materials, causes and signs of structural failure

- map reading
- methods of heat transfer
- natural ventilation procedures
- organisational procedures
- portable fire extinguishers
- principles and methods of extinguishment
- procedures for working with ladders, ropes, lines and tying knots
- safe work practices
- salvage and overhaul
-

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- identify different construction types and their behaviour in fire
- identify signs of structural collapse
- apply firefighting tactics
- select and use appropriate personal protective clothing
- select and use firefighting equipment
- implement actions in the workplace to avoid the risk of injury
- implement BA procedures

Consistency in performance

Competency should be demonstrated over time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed on-the-job and/or in a range of simulated environments.

Specific resources for assessment

Access is required to:

- range of controlled or simulated fires
- firefighting equipment
- extinguishing media
- Breathing apparatus and associated equipment

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment.

Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions.

•

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Types of fire</i> must include:	<ul style="list-style-type: none"> • fires involving dangerous goods and/or hazardous substances • mobile property • non-structures • structures
<i>Personal protective clothing and equipment</i> must include:	<ul style="list-style-type: none"> • breathing apparatus • eye protection • hearing protection • turnout uniform and gloves
<i>Water supplies</i> must include:	<ul style="list-style-type: none"> • open • reticulated • static
<i>Equipment</i> must include:	<ul style="list-style-type: none"> • BA and control equipment • branches, nozzles and monitors • fire extinguishers • forcible entry tools • hoses and hose fittings • ladders and rope lines

	<ul style="list-style-type: none"> portable lights radios salvage gear standpipes, hydrants and booster connections small gear and ancillary equipment
and may also include:	<ul style="list-style-type: none"> other fire extinguishing substances
<i>Extinguishing media</i> must include:	<ul style="list-style-type: none"> extinguishing powder foam gaseous extinguishing agents water
<i>Hazards</i> may include:	<ul style="list-style-type: none"> electricity, including photovoltaic generation gas hazardous products and materials industrial (machinery, equipment, products) smoke, darkness and heat structural collapse structural hazards unauthorised personnel
<i>Assisted</i> may include:	<ul style="list-style-type: none"> first aid handing over to ambulance, medical care or other organisation protecting from the elements providing refreshments
<i>Firefighting objectives</i> must include:	<ul style="list-style-type: none"> confining the spread of fire extinguishment protecting exposures rescuing occupants salvage and overhaul ventilation
<i>Fire strategies</i> must include:	<ul style="list-style-type: none"> defensive mode direct attack indirect attack offensive mode
<i>Firefighting tactics</i> must include:	<ul style="list-style-type: none"> cooling the fuels excluding oxygen interrupting the chemical chain reaction removing fuels ventilation
<i>Firefighting considerations</i>	<ul style="list-style-type: none"> available firefighting resources

must include:	<ul style="list-style-type: none"> • extinguishing media • fire exposures • indications of extreme fire behaviour • signs of structural collapse • size of fire • stage of fire development • topography • type of fire • weather
<i>Firefighting activities</i> must include:	<ul style="list-style-type: none"> • anticipating fire behaviour • applying extinguishing media • applying techniques to maximise the effect and minimise the damage • ensuring safety • hose stream techniques • locating and accessing the fire • protecting and notifying supervisor of evidence of fire cause • search and rescue
<i>Changing conditions at the fire</i> may include:	<ul style="list-style-type: none"> • increase/decrease in fuel available to fire • increase/decrease in heat of fire • increase/decrease in oxygen available to fire • impending structural collapse • other materials becoming involved in fire • fire spread • flame colour and size • increase in heat • signs of structural collapse • smoke colour • weather conditions
<i>Evidence of changing conditions at the fire</i> may include:	<ul style="list-style-type: none"> • fire spread • flame colour and size • increase in heat • signs of structural collapse • smoke colour • weather conditions
<i>Ancillary activities</i> may include:	<ul style="list-style-type: none"> • damming water run off • guarding against hazards • making-up equipment • overhaul • salvage

	<ul style="list-style-type: none"> • securing the area • ventilation
<i>Recording appropriate incident information</i> must include:	<ul style="list-style-type: none"> • recording information in accordance with organisational requirements
and may also include:	<ul style="list-style-type: none"> • attendance records • completing personal notebooks logs and/or report forms • equipment used • objectives set • owner/occupant details • problems encountered • strategies and tactics • values

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Not applicable.

PUAFIR204B Respond to wildfire

Modification History

Release	TP Version	Comments
2	PUA12 V2	Content reviewed Application of the Unit added Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to respond to a wildfire, work as a safe and situationally-aware member of a crew to attack and extinguish a fire, participate in mop-up and patrol operations, and prepare equipment for the next crew.

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

Application of the Unit

This unit applies to personnel who work as a member of a team. Work at this level is undertaken under direct supervision and instruction.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR215 Prevent injury

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

- | | |
|--|---|
| <p>1. Prepare to respond to fire</p> | <p>1.1 Information about location of fire, <i>type of wildfire</i> and most effective route to the fire is obtained, taking into account local conditions.</p> <p>1.2 Personal protective clothing and equipment, and food and fluid requirements are identified and relevant preparations undertaken prior to departure as per organisational standards.</p> |
| <p>2. Proceed to fire</p> | <p>2.1 Location of the fire and <i>type of fuel</i> is confirmed on approach.</p> <p>2.2 Access to the area is gained safely without damage to vehicles and equipment, and minimum damage to the environment.</p> <p>2.3 <i>Evidence relevant to fire cause</i> is noted and brought to the attention of the supervisor.</p> <p>2.4 <i>Indicators of fire behaviour</i> are observed and communicated to supervisor.</p> |
| <p>3. Obtain and use firefighting equipment and extinguishing media</p> | <p>3.1 Nominated <i>extinguishing media</i> and <i>firefighting equipment</i> are located and obtained.</p> <p>3.2 Equipment is used in accordance with organisational and manufacturer's procedures.</p> |
| <p>4. Combat wildfire</p> | <p>4.1 Instructions are received, <i>firefighting strategies and tactics</i> are confirmed and implemented in accordance with organisational safe work practices and procedures.</p> <p>4.2 <i>Suppression techniques</i>, equipment and extinguishing media appropriate to wildfire conditions are used.</p> <p>4.3 Control lines are prepared in accordance with supervisor's instructions.</p> <p>4.4 Equipment is positioned, made ready for use and protected from damage in accordance with</p> |

- organisational procedures.
- 4.5 Fire is attacked taking into account *wildfire hazards* as directed and in accordance with organisational procedures.
- 4.6 Evidence of fire cause and area of fire origin are protected.
- 4.7 *Communication* is maintained at all times in accordance with organisational procedures.
- 5. Observe and react to wildfire and weather conditions**
- 5.1 Conditions at the fire are observed and their effect on fire behaviour and development are noted and reported to supervisor.
- 5.2 *Weather conditions* and changes to fire behaviour are observed and reported to supervisor.
- 5.3 *Variations in topography, fuel features* and fuel arrangements are observed and effect on fire behaviour is reported to supervisor as required.
- 5.4 *Escape routes* and *safety zones* are identified and maintained at all times.
- 5.5 Communication is maintained with other firefighting personnel and supervisor throughout operational activities.
- 6. Participate in mop-up and patrol activities and support operations**
- 6.1 Mopping-up activities are carried out in accordance with organisational procedures.
- 6.2 Patrol of the perimeter or sector of the fire is maintained in accordance with organisational procedures.
- 6.3 Activities to *support firefighting operations* are carried out in accordance with organisational procedures.
- 7. Recover and store equipment**
- 7.1 Equipment and *consumables* are recovered as directed.
- 7.2 Equipment is stored in accordance with organisational procedures.
- 7.3 Cleaning and maintenance are carried out in accordance with organisational procedures.
- 7.4 Damaged or lost equipment is reported in accordance with organisational procedures.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- detect hot spots, hazardous trees, unsecured wildfire perimeter
- undertake dry and wet wildfire attack
- use wildfire control tools and equipment
- work as a member of a team

Required Knowledge

- communication on the fireground
- extinguishing media, water, foam, suppressants
- fire behaviour (fuel, weather and topography)
- health and fitness requirements
- hygiene and wellbeing
- organisational operating procedures
- safe work practices
- wildfire control tactics and techniques
- wildfire hazards, safety techniques

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- react to changing wildfire behaviour due to changes in weather, topography and fuel conditions
- use firefighting equipment
- participate in dry wildfire control
- use extinguishing media in wildfire control
- maintain health and safety of self, other workers and people in the immediate work area
- participate in mop-up and patrol
- undertake operational activities safely

Consistency in performance

Competency should be demonstrated over time in a range of actual and/or simulated field-based workplace environments.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in an agency approved simulated and/or field-based workplace environment.

Specific resources for assessment

Access is required to:

- controlled or contained fires and/or simulated workplace environment
- firefighting equipment and extinguishing media

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an industry-approved simulated work environment. Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. <i>Bold italicised</i> wording in the Performance Criteria is detailed below.	
<i>Type of wildfire</i> must include:	<ul style="list-style-type: none"> • crown • ground • surface
<i>Type of fuel</i> may include:	<ul style="list-style-type: none"> • crop • forest • grass • heath • peat, coal and combustible soils • plantation • scrub
<i>Evidence relevant to fire cause</i> may include:	<ul style="list-style-type: none"> • fresh vehicles tracks • items or objects at scene • nature and behaviour of fire at the scene upon arrival

	<ul style="list-style-type: none"> • nature and colour of smoke and number of columns • people and vehicles leaving the scene • whether gates on access routes to the fire are closed, opened or locked
Indicators of fire behaviour may include:	<ul style="list-style-type: none"> • flame height and length • noise • rate of spread • smoke colour and density • spotting
Extinguishing media must include:	<ul style="list-style-type: none"> • water
and may also include:	<ul style="list-style-type: none"> • Class A foam • retardants • soil • wetting agents
Firefighting equipment must include:	<ul style="list-style-type: none"> • drip torch • hand tools • hose and small gear • knap sack • pump • tanker
and may also include:	<ul style="list-style-type: none"> • chainsaw • ropes and lines
Firefighting strategies must include:	<ul style="list-style-type: none"> • defensive • direct attack • indirect attack • offensive: • parallel attack
Firefighting tactics may include:	<ul style="list-style-type: none"> • backburning • burning out • control line construction • mopping-up • patrol • use of extinguishing media
Suppression techniques may include:	<ul style="list-style-type: none"> • dry firefighting • wet firefighting
Wildfire hazards may include:	<ul style="list-style-type: none"> • burns • disorientation • electrical installations and powerlines • embers

	<ul style="list-style-type: none"> • falling branches/trees • fatigue • heat related illness • lack of visibility • machinery/vehicle • manual handling • noise • radiant heat • smoke inhalation • snake or insect bite • sprain or fracture • trips and falls • water bombing operations
Communication may include:	<ul style="list-style-type: none"> • paging • personal contact • phone • radio • written notes
Weather conditions may include:	<ul style="list-style-type: none"> • atmospheric stability • relative humidity • temperature • variations to wind speed and direction
Variations in topography may include:	<ul style="list-style-type: none"> • aspect • elevation • landscape features • slope
Fuel features must include:	<ul style="list-style-type: none"> • arrangement/distribution • moisture content • quantity • size • type
Escape routes may include:	<ul style="list-style-type: none"> • prepared tracks • roads • trails • waterways
Safety zones may include:	<ul style="list-style-type: none"> • bare ground • burnt areas • clearings • rivers • site of a recent wildfire or prescribed burn • static water bodies

<i>Support firefighting operations</i> may include:	<ul style="list-style-type: none">• providing/transporting food, water and equipment for an incident• working with earth moving equipment such as bulldozer, grader, tractor with blade
<i>Consumables</i> may include:	<ul style="list-style-type: none">• flagging tape• fuel• rubbish• signs

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil

PUAFIR205B Respond to aviation incident (specialist)

Modification History

Release	TP Version	Comments
2	PUA12 V2	Content reviewed Application of the Unit added Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to work under supervision as a member of a specialist team while responding to an aviation incident.

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

Application of the Unit

This unit applies to personnel who are members of specialist aviation incident response teams.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR203B Respond to urban fire

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

1. Respond to aircraft incident

- 1.1 Approach to incident is based on location, terrain, weather, wind speed, direction and response time requirements.
- 1.2 Hazards and personal injury risks associated with ***aircraft incidents*** and/or accidents are identified.
- 1.3 Access to the incident is based on airport and aircraft knowledge.
- 1.4 Changing conditions are monitored, anticipated and managed in accordance with aviation organisational procedures.
- 1.5 Operations are carried out in accordance with regulatory requirements.

2. Use appropriate equipment

- 2.1 ***Equipment*** is selected in accordance with objectives and ***strategies***.
- 2.2 Appropriate rescue and/or firefighting equipment is selected and used in accordance with aviation organisational procedures.
- 2.3 Appropriate equipment is selected and used to isolate aircraft fuselage from hazards and escape paths are maintained in accordance with aviation agency procedures.

3. Evacuate persons and attend to casualties

- 3.1 Hazards and personal injury risks associated with aircraft incidents are identified.
- 3.2 Equipment is selected and located to facilitate evacuation and rescue.
- 3.3 Evacuees are moved and/or directed to a safe area.

4. Conduct operations

- 4.1 ***Operational tactics*** are implemented based on incident conditions and aviation organisation procedures.
- 4.2 Changing conditions are evaluated and any changes to tactics communicated in accordance with

organisational procedures.

4.3 Operations are carried out in accordance with any regulatory requirements.

4.4 Fuselage protection and fire free escape paths are established and maintained in accordance with aviation organisational procedures.

4.5 Assistance is provided during aircraft evacuation.

4.6 Evacuees are moved or directed to a safe area in accordance with Aerodrome Emergency Plan.

4.7 Appropriate rescue techniques are used to release entrapped persons.

5. Conclude operations

5.1 Evidence at the aircraft is preserved and secured.

5.2 Any damage to the aircraft caused by forcible entry is recorded and reported in accordance with organisational and legislative requirements.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- adhere to airport operating procedures
- apply aviation strategy, tactics and techniques
- apply extinguishing mediums
- identify hazards in aircraft
- identify toxic environments

Required Knowledge

- aircraft construction
- aircraft emergency procedures
- aircraft hazards and risks
- airport emergency procedures

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence

Assessment must confirm the ability to:

required to demonstrate competency in this unit

- implement aviation firefighting tactics and strategies
- select and use firefighting equipment, extinguishing mediums, personal protective clothing and equipment in a manner compliant with the aviation organisational and legislative/regulatory requirements and objectives

Consistency in performance

Competency should be demonstrated over time to ensure consistency of performance in a range of applicable simulated scenarios, consistent with the range of response responsibility requirements.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed over time in a range of actual or simulated workplace environments.

Specific resources for assessment

Access is required to:

- firefighting equipment
- protective clothing and equipment
- aircraft/simulator
- fire extinguishment media
- relevant legislation and regulations
- simulated aviation incidents

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment.

Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<p><i>Aircraft incidents</i> may include:</p>	<ul style="list-style-type: none"> • aircrew escape units • brake failure • crashes in: • difficult terrain • mid air • military • multiple aircraft • on water • structures off airport • structures on airport • vehicles • electrical failure • explosion • faulty armaments • fires in: • auxiliary power units • brakes • cabin • cargo • engines • re-fuelling • tyres • foreign object damage • fuel spill • hydraulic failure • injured, fatigued, and/or incapacitated passengers/crew • sabotage • tyre failure • undercarriage failure • wildlife collisions
<p><i>Equipment</i> may include:</p>	<ul style="list-style-type: none"> • aircraft rescue and firefighting vehicle • ancillary firefighting equipment • apparatus to deliver extinguishing medium • breathing apparatus • escape safety devices • extrication devices

	<ul style="list-style-type: none"> • firefighting hose • fixative or sealant for composite fibres • ladders • lighting equipment • rescue boats • rescue equipment • specialised tools for cabin entry • ventilation equipment
<i>Strategies</i> must include:	<ul style="list-style-type: none"> • control and extinguish fire • isolate aircraft fuselage from hazard • maintain safe paths of egress
<i>Operational tactics</i> must include:	<ul style="list-style-type: none"> • defensive firefighting tactics • offensive firefighting tactics

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil

PUAFIR209B Work safely around aircraft

Modification History

Release	TP Version	Comments
2	PUA12 V2	Application of the Unit added Unit revised to reflect current work requirements Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to apply safe work practices when operating in or around aircraft at an airbase and when engaged in a range of non-specialist, air operations activities.

Aviation operations occur in a heavily regulated environment. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

This unit applies to personnel performing primary aviation roles within the Australasian Inter-service Incident Management System (AIIMS) and all other aviation support roles when operating in or around aircraft. The primary AIIMS aviation roles that require this unit are Air Operations Manager, Aircraft Officer, Air Observer, Air Attack Supervisor and Air Base Manager.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

1. Work safely in the vicinity of aircraft

PERFORMANCE CRITERIA

- 1.1 ***Briefing*** is received prior to deployment or whenever circumstances relevant to their safety or current tasking have changed.
- 1.2 Briefing on work to be undertaken is undertaken in an ***appropriate location***.
- 1.3 ***Suitable visible clothing and protective equipment*** are used.
- 1.4 ***Appropriate precautions*** and clearances are followed when operating on or near aircraft movement areas.
- 1.5 Any approach to an operating ***aircraft*** is made according to ***organisational aircraft approach procedures***, from an angle visible to the pilot or flight crew and with approval of the pilot or flight crew.
- 1.6 Adequate clearance is maintained from propellers, rotors and/or turbine engines, exhaust gases and engine intakes.
- 1.7 Typical manoeuvring patterns of aircraft are anticipated through ***activities***.
- 1.8 Any instructions or signals from pilots or ***staff controlling aircraft*** are complied with
- 1.9 ***Site hazards*** are identified.

ELEMENT	PERFORMANCE CRITERIA
2. Facilitate safe ground support	<p>2.1 Appropriate precautions are observed when positioning vehicles or equipment close to aircraft.</p> <p>2.2 Aircraft design features are respected while boarding, loading or handling aircraft.</p> <p>2.3 Instructions from pilots and organisational staff coordinating aircraft operations, and organisational procedures and placards are followed during ground support operations.</p> <p>2.4 Aircraft loading is conducted under pilot or flight crew member supervision and appropriate weight, balance and loading system are complied with.</p> <p>2.5 Areas are designated and separated according to site features and the specific operations being conducted.</p> <p>2.6 Fitting of equipment to an aircraft is conducted under pilot supervision in accordance with appropriate regulatory approvals.</p> <p>2.7 Aircraft fuels, oils, and supplies are stored and handled according to regulatory requirements and organisational procedures.</p> <p>2.8 Any suspected defects or hazards to aircraft or equipment are reported to pilot or other appropriate supervisor.</p> <p>2.9 Appropriate aerodrome regulations are complied with.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- using specialist aviation support equipment

Required Knowledge

- aerodrome familiarisation
- aerodrome working and lighting
- aircraft familiarisation
- aircraft movement characteristics
- aircraft performance, operation, loading and refuelling precautions

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- comply with regulatory requirements and organisational procedures
- identify hazards and precautions effected on a consistent, conscious and continuing basis
- implement procedures for unusual events
- take action with an overriding concern for safety and quality rather than minimal observance of requirements.

Consistency in performance

Competency should be demonstrated over time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed on-the-job or in a simulated work environment.

Specific resources for assessment

Access is required to:

- actual or simulated aircraft and aerodrome facilities

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment.

Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Briefing</i> must include:	<ul style="list-style-type: none"> • situation • mission • execution • administration • command and communications • safety • questions
<i>Appropriate location</i> must include:	<ul style="list-style-type: none"> • area that is: <ul style="list-style-type: none"> • free of distractions (movement, noise) • safe • convenient to subsequent deployment needs • necessary facilities and equipment
<i>Suitable visible clothing and protective equipment</i> may include:	<ul style="list-style-type: none"> • fire extinguisher • first aid kit • head, hand, eye, ear and foot protection • high visibility overalls/vests • protective overalls • respiratory protection • signalling devices, lighting or beacons
<i>Appropriate precautions</i> may include:	<ul style="list-style-type: none"> • advisory instructions • avoiding obstructions/hazards and navigation aids • clearances (radio) • fixed wing and helicopter marshalling • ground markings/lighting • light signals • observing aerodrome limits
<i>Aircraft</i> may include:	<ul style="list-style-type: none"> • aeroplanes • helicopters • unmanned aerial vehicles • other airborne vehicles
<i>Organisational aircraft approach procedures</i> include:	<ul style="list-style-type: none"> • complying with operational placards • complying with pilot or flight crew instructions • maintaining visibility with pilot or flight crew

<p><i>Activities</i> may include:</p>	<ul style="list-style-type: none"> • circuit procedures • ground manoeuvring capabilities • special procedures (such as at night or in poor weather) • take-off, approach and landing characteristics
<p><i>Staff controlling aircraft</i> may include:</p>	<ul style="list-style-type: none"> • aircraft coordinating personnel • flight crew • ground support supervisor • pilot
<p><i>Site hazards</i> may include:</p>	<ul style="list-style-type: none"> • dust • level of visibility • livestock • masts/aerials • native fauna • public • terrain • trees • weather conditions • wires/powerlines/fences

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Not applicable.

PUAFIR215 Prevent injury

Modification History

Release	TP Version	Comments
2	PUA12 V2.1	Editorial changes.
1	PUA12 V2	New unit.

Unit Descriptor

This unit covers the competency required to identify and avoid workplace hazards and risks, to maintain personal safety and to report identified issues to supervisors and team members.

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

Application of the Unit

This unit is designed as an introduction to safe work practices and is specifically relevant to a workplace requiring people to be involved in incidents, prescribed burning and/or operational aspects of emergency management.

This unit applies to personnel who work as a member of a team. Work at this level is undertaken under direct supervision and instruction.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Identify workplace hazards and risks, and advise others

- 1.1 Procedures and practices are followed to identify ***hazards*** and ***risks*** in the ***workplace***.
- 1.2 Identified hazards and risks in the work area are communicated to team members and supervisors.
- 1.3 Identified factors which may create or escalate the immediate risk to life, property or the environment are reported.

2. Implement hazard and risk control procedures

- 2.1 Appropriate ***personal protective clothing and equipment*** is selected and donned in accordance with organisational procedures.
- 2.2 Appropriate procedures for dealing with hazards and ***controlling risks*** in the workplace are followed in accordance with work health and safety guidelines and organisational procedures.
- 2.3 Equipment appropriate for dealing with a hazard is selected for use and checked in accordance with standard operating procedures.
- 2.4 Personal health and welfare is managed in accordance with organisational policy.

3. Monitor effectiveness of hazard and risk control procedures

- 3.1 Situation is monitored to ensure the continued effectiveness of the hazard and risk control procedures.
- 3.2 ***Changes in incident behaviour and conditions*** are reported immediately to supervisor.
- 3.3 Activities and ***debriefings*** regarding hazard and risk control procedures are participated in as appropriate.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- apply safe work practices in accordance with organisational work health and safety policies and procedures
- identify typical hazards and risks in the workplace, and apply control measures
- select equipment pertinent to incidents, prescribed burning and/or operational aspects of emergency management
- select personal protective clothing

Required Knowledge

- basic principles of risk assessment
- methods of hazard and risk control and reporting, and debriefings
- occupational hazards and risks encountered in the workplace
- organisational health and fitness guidelines
- personal protective clothing and equipment requirements
- risk control measure such as eliminate, isolate and substitute
- signs of fatigue, heat related illness, dehydration, fatigue and stress
- situational awareness
- welfare management, such as signs of occupational stress, limiting stress, dealing with stress and seeking assistance

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- correctly identify hazards and risks in the workplace
- apply organisational procedures including the correct selection and use of personal protective equipment and clothing
- advise and report workplace hazards and risks, and apply and monitor control measures

Consistency in performance

Competency should be demonstrated over time in a range of actual or simulated workplace environments.

Context of and specific

Context of assessment

resources for assessment

Competency should be assessed on-the-job and/or in a range of simulated environments.

Specific resources for assessment

Access is required to:

- appropriate protective clothing and equipment
- organisational procedures.

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment. Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. <i>Bold italicised</i> wording in the Performance Criteria is detailed below.	
<i>Hazards</i> may include:	<ul style="list-style-type: none"> • aerial retardant drops • aircraft • broken terrain • biological, bites, infections, stings • chemicals • confined space • electricity • entrapment • environmental • falling objects • explosions

	<ul style="list-style-type: none"> • structural collapse • subsidence • water load • fire • flood, storm and tempest rescues • hazardous chemicals • heavy machinery • manual handling • personal • dehydration • heat stress • psychological such as critical incident stress, shock • prescribed burning activities • travelling in vehicles • vehicle and industrial rescue/extrication
Risks may include:	<ul style="list-style-type: none"> • damage to property and environment • injury to self and/or team members • loss of life and property
Workplace may include:	<p>Locations where activities and operations may occur such as:</p> <ul style="list-style-type: none"> • confined spaces • mobile property • open spaces • public and private property (including crown land) • structures • water
Personal protective clothing and equipment must include:	<ul style="list-style-type: none"> • emergency response clothing
and may also include:	<ul style="list-style-type: none"> • chainsaw chaps • chemical protective clothing • eye, ear and head protection • face shield • personal accessories kit • personal distress units • personal lines • respiratory protection
Controlling risks must include:	<ul style="list-style-type: none"> • adequate food, fluid and other welfare needs during operations • appropriate training • eye, sight, hearing protection

	<ul style="list-style-type: none"> • fire blankets/roll over protection • goggles, face shield, hearing protection and chainsaw chaps • hierarchy of control • safety warning signs • use of clothing and equipment to provide protection
<i>Changes in incident behaviour and conditions</i> may include:	<ul style="list-style-type: none"> • environmental conditions • escalation of incident
<i>Debriefings</i> may include:	<ul style="list-style-type: none"> • end of incident • end of shift

Unit Sector(s)

Not applicable.

Custom Content Section

Not applicable.

PUAFIR303B Suppress wildfire

Modification History

Release	TP Version	Comments
2	PUA12 V2	Application of the Unit added Unit revised to reflect current work requirements Context of Assessment revised Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to work as a situation-aware member of a crew to apply appropriate fire control strategies and safe work practices to extinguish a wildfire, participate in mop-up and patrol operations, and prepare equipment for the next crew.

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

Application of the Unit

This unit applies to personnel who work as a member of a team. Work at this level is often undertaken without direct supervision and instruction. There may be some level of supervision of other members of the crew at this level.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR204B Respond to wildfire

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| <p>1. Receive and report details of wildfire</p> | <p>1.1 Details of the wildfire including its location, <i>type</i>, behaviour and development are received and recorded.</p> <p>1.2 Fire details are reported in accordance with organisational procedures.</p> |
| <p>2. Prepare to respond to fire</p> | <p>2.1 Location of the wildfire is confirmed and the safest effective <i>access</i> route is determined.</p> <p>2.2 <i>Personal protective clothing and equipment</i>, apparel, food and water are obtained before departure, in accordance with organisational requirements.</p> <p>2.3 Most appropriate method of transport to the wildfire is selected and used.</p> |
| <p>3. Proceed to fire</p> | <p>3.1 Location of the wildfire is confirmed by observation or from instructions while on approach.</p> <p>3.2 Access to area is determined and achieved without injury to personnel or damage to vehicles, equipment or <i>environmentally sensitive areas</i>.</p> <p>3.3 Evidence observed on approach relevant to wildfire cause is noted and brought to the attention of the appropriate authority.</p> <p>3.4 <i>Navigational aids</i> are used for planning and operational purposes.</p> |
| <p>4. Protect people and assets</p> | <p>4.1 As far as conditions allow, number, location and safety of people and <i>assets</i> in the threatened area is determined and assessed.</p> |

- 4.2 Appropriate *protective procedures* are implemented under direction, to protect persons in the path of a wildfire.
- 4.3 Access by the public and personnel to hazardous locations is controlled as directed and in accordance with organisational procedures.
- 4.4 Defensibility of property is considered and, if appropriate, assistance is provided to help occupiers.
- 4.5 Safety of people and assets in the threatened area is monitored during the course of the fire.
- 4.6 Safety of people and security of assets in the area is checked and reported after the passing of the fire.

5. Combat wildfire

- 5.1 Access to the area of operations is gained in the safest and most effective manner.
- 5.2 Notification of arrival and appropriate report is provided.
- 5.3 Briefing is received including area of operations, strategies and tactics to be employed.
- 5.4 Most suitable location to commence wildfire control operations is selected.
- 5.5 *Firefighting media and equipment* are selected and used effectively and safely in accordance with organisational procedures.
- 5.6 *Fire hazards* are identified and action taken to minimise the risk of injury to the public, personnel and self.
- 5.7 *Firefighting strategies* are implemented to achieve objectives in accordance with organisational procedures.
- 5.8 Fire control activities are undertaken to minimise overall damage and impact on assets and the environment.
- 5.9 *Potential fire behaviour* is considered and acted upon to ensure safety and achievement of objective.
- 5.10 *Fuel, weather* and *topographical factors* are observed and potential fire behaviour anticipated.
- 5.11 Communication is maintained with supervisor and other firefighters in the work area.
- 5.12 *Fire reports* are provided to supervisor as required.
- 5.13 Area of origin and *evidence of fire cause* are protected and brought to attention of supervisor or relevant authority.
- 5.14 *Escape routes* and *safety zones* are established

- and communicated to personnel.
- 6. Conduct mop-up and patrol activities**
- 6.1 Mop-up activities are carried out in accordance with guidelines and conditions.
- 6.2 Patrol of the perimeter or sector of the fire is maintained in accordance with organisational procedures and guidelines.
- 7. Recover and maintain equipment**
- 7.1 Equipment is made up and made ready for operational use in accordance with organisational procedures.
- 7.2 Damaged or missing equipment is replaced, recorded and/or reported in accordance with organisational procedures.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- communicate effectively in writing and orally
- detect hot spots and hazardous trees
- interpret fire weather, fuels and terrain and predict the likely impact on fire behaviour
- mop-up
- read maps
- receive briefings and confirm instructions
- undertake back burning and burning out
- use wildfire control tools and equipment
- work as part of a team

Required Knowledge

- defensive/offensive firefighting strategies and tactics:
 - asset protection
 - backburning and burning out
 - control lines and firebreaks
 - defensible space
 - direct, indirect, parallel attack
 - fire attack procedures
 - lighting patterns
 - standard operating procedures; reporting; patrol; mop-up
 - wet, dry firefighting
- fire behaviour:

- fire development
- flame height and intensity
- rate of spread,
- junction zones
- spotting
- firefighting protocols
- fireground hazards
- fire weather conditions and impact on fire behaviour:
 - atmospheric stability
 - relative humidity
 - temperature
 - wind speed and direction
- fuel and its impact on fire behaviour
 - moisture content, quantity, type, arrangement and distribution,
 - size, drought effect, curing
- organisational first aid requirements
- organisational procedures for dealing with injury
- protection of area of origin and evidence of fire cause
- safety near vehicles and machines
- terrain and physical feature and their impact on fire behaviour and suppression:
 - aspect
 - fuel variations
 - slope
 - weather variations

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- anticipate and react to changing wildfire behaviour
- observe and react to weather behaviour
- accurately assess whether or not it is safe to defend assets
- undertake dry wildfire control activity
- monitor effectiveness of tactics
- use firefighting equipment and extinguishing media
- maintain safety and health of self, other workers and

- people in the wildfire area
- use communication equipment
- read maps
- protect area of origin and evidence of fire cause

Consistency in performance

Competency should be demonstrated over time in a range of actual and/or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Evidence of performance at a wildfire or prescribed burn is required for attainment of Elements 5 and 6 of this unit.

The remaining elements should be assessed in an agency approved field-based environment or simulation.

Specific resources for assessment

Access is required to:

- access to wildfire or prescribed burns and/or approved field-based environment
- firefighting equipment and extinguishing media

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment. Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for

different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Types</i> must include:	<ul style="list-style-type: none"> • crown • ground • surface
<i>Access</i> may include:	<ul style="list-style-type: none"> • aircraft • boat • foot • vehicle
<i>Environmentally sensitive areas</i> may include:	<ul style="list-style-type: none"> • areas of: <ul style="list-style-type: none"> • fragile soils • native flora and fauna • rare and endangered species • threat to water quality
<i>Navigational aids</i> must include:	<ul style="list-style-type: none"> • maps
and may also include:	<ul style="list-style-type: none"> • aerial photographs • compass • global positioning systems
<i>Assets</i> may include:	<ul style="list-style-type: none"> • area of rare or sensitive flora and fauna • buildings • culturally significant sites • crops • plantations • property • public lands • stock • utilities and infrastructure (rail, power and telephone lines, water supply structures, communications towers, bridges)
<i>Protective procedures</i> may include:	<ul style="list-style-type: none"> • alerts and warnings • in-situ protection • relocation
<i>Firefighting media</i> must include:	<ul style="list-style-type: none"> • water
and may also include:	<ul style="list-style-type: none"> • Class A foam • earth • fire suppressants (short and long term) • retardants

	<ul style="list-style-type: none"> • wetting agent
Firefighting equipment must include:	<ul style="list-style-type: none"> • driptorch • hand tools • hose and small gear • pump • tanker
and may also include:	<ul style="list-style-type: none"> • aircraft • chainsaw • earth moving machinery • knap sack • ropes and lines
Fire hazards must include:	<ul style="list-style-type: none"> • burns • disorientation • environmental • falling branches and trees • falling objects • fatigue • heat-related illness (heat exhaustion and dehydration) • lack of visibility • manual handling • mine shafts • rolling objects • smoke inhalation • snake or insect bite • sprain or fracture • trips/falls • water bombing operation
Firefighting strategies must include:	<ul style="list-style-type: none"> • combination attack • combined strategy • defensive strategy • direct attack • indirect attack • mop-up • offensive strategy • parallel attack • patrol
Potential fire behaviour may include:	<ul style="list-style-type: none"> • fire development • flame height and intensity • fuel load and arrangement • rate of spread

	<ul style="list-style-type: none"> • spotting • change due to terrain, topography • change due to weather conditions - winds, fire whirls
Fuel may include:	<ul style="list-style-type: none"> • crop • forest • grass • heath • plantation: <ul style="list-style-type: none"> • stage 1 – post establishment • stage 2 – pre-canopy closure • stage 3a – canopy closure (unpruned) • stage 3b – canopy closure (pruned) • stage 4 – thinned • stage 5 – mature • stage 6 – harvesting/clear felling • scrub
Fuel factors which may impact on fire development must include:	<ul style="list-style-type: none"> • arrangement/distribution • effects of drought • moisture content • quantity • seasonal effects • size • topography • type
Weather factors which may impact on fire development must include:	<ul style="list-style-type: none"> • anabatic winds • atmospheric stability • cold fronts • diurnal variations • katabatic winds • land breezes • local effects • relative humidity • sea breezes • temperature • vegetation edge effects • wind changes • wind direction and speed
Topographical factors which may impact on fire development must include:	<ul style="list-style-type: none"> • aspect • elevation • local wind effects

	<ul style="list-style-type: none"> • slope • wind turbulence
<i>Fire reports</i> may include:	<ul style="list-style-type: none"> • effectiveness of strategies and tactics • fire behaviour • number and status of resources • safety and hazards • weather • welfare of personnel • work achieved and required
<i>Evidence of fire cause</i> may include:	<ul style="list-style-type: none"> • fresh vehicles tracks • nature and behaviour of fire at the scene upon arrival • nature and colour of smoke and number of columns • people and vehicles leaving the scene • whether gates on access routes to the fire are closed, opened or locked
<i>Escape routes</i> may include:	<ul style="list-style-type: none"> • prepared tracks • roads • trails • waterways
<i>Safety zones</i> may include:	<ul style="list-style-type: none"> • bare ground • burnt areas • clearings • rivers • site of a recent wildfire or prescribed burn • static water bodies

Unit Sector(s)

Not applicable.

PUAFIR309B Operate pumps

Modification History

Release	TP Version	Comments
2	PUA12 V2	Content reviewed Application of the Unit added Unit revised to reflect current work requirements Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to operate a portable and/or appliance-mounted pump at an incident.

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

Application of the Unit

This unit applies personnel responsible for operating centrifugal, appliance-mounted and portable pumps and foams systems at an incident. Typically, this work requires the application of the basic principles of hydraulics i.e. the study and behaviour of water.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAEQU001B Prepare, maintain and test response equipment

And one of the following four units:

PUAFIR203B Respond to urban fire

OR

PUAFIR218 Respond to isolated structure fire

OR

PUAFIR204B Respond to wildfire

OR

PUAFIR205B Respond to aviation incident (specialist)

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare pump to deliver water

- 1.1 ***Type of pump*** selected is appropriate to the operation/incident.
- 1.2 ***Suitability of water supply*** for operational purposes is determined.
- 1.3 Pump is sited and positioned to receive and deliver water supply in accordance with organisational requirements.
- 1.4 Pump and ***primer*** are engaged in accordance with manufacturer guidelines and ***organisational procedures***.
- 1.5 Appropriate ***foam agents*** and ***foam equipment*** are prepared for the production of foam at an incident, where required.

2. Operate pump

- 2.1 Pump components, ***ancillary equipment*** and principles of operation are utilised to draught water from a ***static supply*** to boost water from a ***reticulated supply*** and/or to deliver water from the

appliance tank in accordance with appliance capability.

2.2 Pump operation is in accordance with manufacturer specifications, organisational procedures and workplace health and safety (WHS) guidelines

2.3 *Principles of hydraulics* are considered when determining pump settings.

2.4 Pumps are operated and *observed* to ensure that pressure and flow meet operational requirements and that safety to personnel is maintained.

2.5 Pump performance is monitored and maintained to ensure maximum efficiency of operation, to detect and correct pumping and safety problems, and to take appropriate action in accordance with organisational procedures.

2.6 Pump operations are carried out avoiding injury to personnel and damage to equipment and facilities.

2.7 Mechanical malfunctions are reported to supervisor according to organisational procedures.

3. Conclude pump operations

3.1 Pump operations are concluded in accordance with organisational procedures.

3.2 Ancillary equipment is collected and stowed in accordance with organisational requirements.

3.3 Maintenance procedures and checks are undertaken to ensure pump and ancillary equipment are serviceable in accordance with organisational requirements.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- operate a pump using gauges and controls
- position a pump
- prime and operate a pump
- supply water to a location by use of a relay pump

Required Knowledge

- determination of water supply capacity
- discharge and flow rates
- hand signals to indicate water and pump requirements

- positioning pumps
- jet reaction
- power train for pump
- principles of hydraulics (flow and pressure)
- principles of priming and operating pumps
- pump components and their principles of operation
- pump gauges and controls
- relay pumping
- simple hydraulic calculations including friction loss
- types of foam concentrate
- types of pumps and primers

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- maintain water supply to branch operators
- maintain appropriate levels of pressure
- respond appropriately to changing circumstances
- when using foam, supply/deliver the correct proportion of foam and water and maintain supply of foam concentrate
- when pumping from an appliance tank, monitor levels of water remaining in appliance tank to ensure minimum levels for crew protection
- pump without injury to personnel or damage to equipment

Consistency in performance

Competency should be demonstrated over time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed on-the-job and/or in a range of simulated environments.

Specific resources for assessment

Access is required to:

- range of pumps

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment.

Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Type of pump</i> may include:	<ul style="list-style-type: none"> • appliance-mounted pumps • centrifugal • ejector • free-standing, trailer or vehicle-mounted • multi-stage centrifugal • peripheral • petrol or diesel driven • portable pumps • positive displacement • series/parallel centrifugal • single-stage centrifugal • water turbine
<i>Suitability of water supply</i> may include:	<ul style="list-style-type: none"> • capacity • pressure • salinity • turbidity
<i>Primer</i> may include:	<ul style="list-style-type: none"> • diaphragm • exhaust ejector

	<ul style="list-style-type: none"> • force pump • rotary gear • rotary vane • water ring
Organisational procedures may include:	<ul style="list-style-type: none"> • fireground procedures • maintenance procedures and checks • manufacturer specifications • WHS guidelines • pumping practices • service procedures • standard operating procedures • training manuals
Foam agents may include:	<ul style="list-style-type: none"> • alcohol resistant type foam • aqueous film forming foam • Class A foam • protein foam
Foam equipment may include:	<ul style="list-style-type: none"> • Class A foam systems • Class B foam systems • compressed air foam system • electronic foam systems • foam-making branch pipes • high back-pressure (sub-surface injection) foam system • high expansion foam equipment • in-line inductors • in-line foam generators • medium expansion foam equipment • pick-up tubes • pressure-balanced foam systems • round-the-pump proportioners
Ancillary equipment may include:	<ul style="list-style-type: none"> • adaptors and matching pieces • breechings • couplings • delivery hose • hose clamps • hydrant tools and openers • ropes/lines • standpipes • suction hoses, spanners, strainers, baskets
Static supply may include:	<ul style="list-style-type: none"> • dams • lakes

	<ul style="list-style-type: none"> • portable dams • reservoirs • rivers • seawater • swimming pools • tanks
<i>Reticulated supply</i> may include:	<ul style="list-style-type: none"> • distributary mains • reticulation mains • trunk mains
<i>Principles of hydraulics</i> may include:	<ul style="list-style-type: none"> • discharge and flow rates • friction loss • head pressure calculations • jet reaction • required branch and nozzle pressures
<i>Observed may include</i>	<ul style="list-style-type: none"> • branch operator activities, where possible • checking water supply levels • monitoring of gauges and warning lights • pump operators working on other units when relay pumping • use of pressure relief valves and transfer valves • use of pump performance charts or tables illustrating information such as optimum nozzle pressure and friction loss

Unit Sector(s)

Not applicable.

PUAFIR406B Develop prescribed burning plans

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the development of plans for prescribed burning in areas for which the organisation is responsible to meet defined objectives through a range of strategies.

Application of the Unit

Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s

PUAFIR303B Suppress wildfire

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify target areas and burn objectives	1.1 Areas requiring prescribed burning are identified in accordance with the organisation's procedures 1.2 Burn objectives are developed in accordance with the organisation's procedures
2. Prepare plans for prescribed burning	2.1 Strategies and tactics which are suitable for the location and will meet objectives, are nominated in accordance with organisational procedures and programs 2.2 Consultation with other <i>interested parties</i> , during the planning process, is conducted in accordance with organisational procedures 2.3 Proposed strategies and tactics take into account the safety of persons and <i>protection of property, assets</i> and the <i>environment</i> 2.4 Resources required and conditions for implementation of the strategies and tactics, are specified in accordance with organisational procedures
3. Monitor implementation of prescribed burning plans	3.1 Progress of plan implementation is monitored for compliance with organisational requirements 3.2 Prescribed burning activities are recorded in accordance with organisational procedures 3.3 <i>Incidents</i> are reported and investigated in accordance with organisational procedures

ELEMENT

PERFORMANCE CRITERIA

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

community consultation and liaison
recommending actions to be taken, communicating with others
preparation of plans
map reading
measuring quantities, calculating areas

Required Knowledge

wildfire hazards
prescribed burning strategies
wildfire behaviour
organisational procedures and programs
legislation relevant to wildfire hazard reduction
effects of fire on vegetation, fauna and fuel accumulation
effects of fire on areas and places of cultural significance

Evidence Guide

EVIDENCE GUIDE

**Critical aspects for
assessment and evidence
required to demonstrate**

It is essential for this unit that competence be demonstrated by:

EVIDENCE GUIDE

competency in this unit

identifying wildfire hazards
 developing objectives
 meeting objectives for burn strategies and tactics
 minimising environmental impact
 recognising and consulting interested parties

Consistency in performance

competency demonstrated over a period of time within the range of variables

Context of and specific resources for assessment

Context of assessment

on the job and/or
 indirect evidence in the form of documentation, and/or
 discussion with the applicant and nominated referees
 simulated situations

Specific resources for assessment

travel to remote locations may be necessary

Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

Range Statement

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Hazards may include

flammable vegetation
 flammable hazardous materials
 adjoining land use, proximity to urban areas

Actions may include

assist in community protection
 hazard reduction
 vegetation management

RANGE STATEMENT

	<ul style="list-style-type: none"> habitat management management of cultural sites
Interested parties may include	<ul style="list-style-type: none"> government organisations including local, state and federal adjacent land owners and/or managers community groups with specific interests
Safety of people may include	<ul style="list-style-type: none"> people on areas adjacent to the target area people permanently or temporarily in the target area smoke management
Protection of property and assets may include	<ul style="list-style-type: none"> property and assets adjacent to the target area commercial crops or other assets on the target area cultural sites, historical buildings, etc.
Protection of the environment may include	<ul style="list-style-type: none"> native flora and fauna rare and endangered species water quality soil conservation safe use of chemical sprays smoke management
Incidents may include	<ul style="list-style-type: none"> fire escapes over control lines accidental chemical spillage damage to equipment and property damage to environment injury to persons complaints from persons or organisations

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil

PUAFIR407B Conduct prescribed burning

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor This unit covers the competency for conducting a prescribed burn.

Application of the Unit

Application of the Unit The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s PUAFIR303B Suppress wildfire

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare to burn

- 1.1 Burn plan is identified in accordance with the organisational procedures and legislative requirements
- 1.2 A *contingency plan* is developed based on *local conditions at the time of burn* and communicated to all personnel
- 1.3 Permits are obtained in accordance with organisational procedures
- 1.4 Burn *notifications* are issued in accordance with organisational procedures
- 1.5 Resource requirements are identified
- 1.6 Control lines are specified and prepared in accordance with organisational procedures
- 1.7 *Assets* are *protected* in accordance with organisational procedures
- 1.8 *Weather conditions* are *monitored*

2. Conduct burn

- 2.1 *Resources* are gathered and deployed
- 2.2 Day of burn notifications are issued
- 2.3 Pre burn checks are conducted
- 2.4 *Lighting* is conducted in accordance with plan or organisational procedures
- 2.5 *Burning* is monitored and operational changes are made as required

ELEMENT	PERFORMANCE CRITERIA
3. Conduct post burn activities	2.6 Records are kept in accordance with organisational procedures 2.7 Burn operations are concluded 3.1 Outcomes of the burn are assessed and reported 3.2 Variations from the burn plan are reported in accordance with organisational procedures 3.3 Restoration and rehabilitation is carried out in accordance with organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

developing a prescribed burn
 conducting high and low intensity prescribed burns
 establishing control lines for prescribed burns
 developing a contingency plan
 monitoring the burn
 undertaking patrol activities

Required Knowledge

legislative, organisational policy and procedures for conducting a prescribed burn
 types of prescribed burns
 seasonal restrictions on prescribed burns
 authorisations required for conducting a burn
 high and low intensity prescribed burns
 ignition patterns and techniques
 developing a prescription
 resource requirements
 procedures for monitoring prescribed burns and securing burn area

REQUIRED SKILLS AND KNOWLEDGE

Evidence Guide

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence is demonstrated in:

- the preparation of burn plans for a designated area
- the effective conduct of a burn, utilising the appropriate resources and record action taken
- follow up activities once the burn is completed

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

Context of and specific resources for assessment

Context of assessment

Evidence of competence may be demonstrated on the job and/or in a simulated environment

Specific resources for assessment

Access to a range of controlled or simulated fires
lighting equipment

Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

Range Statement

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised***

RANGE STATEMENT

wording in the Performance Criteria is detailed below.

Assets to be protected	<ul style="list-style-type: none"> buildings historic relics camp or recreational areas utilities (power and telephone lines, water supply structures, communications towers) research plots, reference areas area of rare or sensitive flora and fauna crops plantations other property
Notifications may be given to persons or organisations who	<ul style="list-style-type: none"> have an interest in the area to be burned have an interest in adjacent land to which a burn could spread have an interest in managing the consequences of a burn have an interest in specific assets may be concerned by evidence of a burn
Notification plans are required for	<ul style="list-style-type: none"> private land public land
Weather conditions to be monitored	<ul style="list-style-type: none"> temperature, relative humidity, wind, atmospheric stability
Resources may include	<ul style="list-style-type: none"> experienced crew for ground ignition, trained navigators, bombardiers for aerial ignition, equipment and supplies, tankers, other vehicles, equipment, back-up, logistical support
Lighting techniques and patterns may include	<ul style="list-style-type: none"> ignition method lighting pattern ignition spacing
Burn operations may include	<ul style="list-style-type: none"> low intensity burns high intensity burns
Monitoring of burning may include	<ul style="list-style-type: none"> observations predictions

RANGE STATEMENT

	<ul style="list-style-type: none"> recording fuel moisture content wind speed and direction flame height rate of spread smoke development
Conclusion of burning operations	<ul style="list-style-type: none"> patrol or burn area mop up black out
Contingency plans for escapes include	<ul style="list-style-type: none"> reasons for escape special resources/secondary control lines command structure
Local conditions at time of burn may include	<ul style="list-style-type: none"> wind strength and direction temperature changes in conditions anticipated changes
Restoration and rehabilitation may be required for	<ul style="list-style-type: none"> control lines vehicle tracks areas disturbed by tracked machinery revegetating damaged areas repairing fences

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil

PUAFIR501B Conduct fire investigation and analysis activities

Modification History

Release	TP Version	Comments
2	PUA12 V2	Application of the Unit added Unit revised to reflect current work requirements Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to respond to an incident and to undertake a preliminary fire investigation prior to the arrival of a specialist fire investigator.

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

Application of the Unit

This unit applies to personnel required to conduct a fire investigation at a fire or related incident.

This unit is not intended to replace the role of the specialist fire investigator; the role of the specialist fire investigator is encompassed within the PUA60912 Advanced Diploma of Public Safety (Fire Investigation).

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUALAW001B Protect and preserve incident scene

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

1. Plan fire/incident investigation and analysis activities

2. Collect, collate and preserve evidence

PERFORMANCE CRITERIA

- 1.1 Roles and responsibilities of government and non-government organisations involved at a fire/incident investigation are identified.
- 1.2 Procedures and ***protocols for the cooperation and coordination of relevant organisations*** involved in the fire/incident investigation are identified, agreed and implemented.
- 1.3 Strategies required to conduct a fire/incident investigation and analysis are identified and implemented in accordance with organisational procedures.
- 1.4 Preliminary and background ***sources of information*** concerning the context of the fire/incident investigation is prepared.
- 1.5 Relevant legislative requirements that impact on the collection and recording of ***evidence*** are identified.
- 1.6 Evidence and information gathering process at the incident site is planned in accordance with organisational and legislative requirements, environmental conditions and resource availability.
- 1.7 Required fire investigation equipment and resources for the incident are identified and assembled.
- 2.1 ***Methods and techniques of evidence and information collection*** appropriate to the investigation are applied. accordance with legislative requirements
- 2.2 Various types of evidence and information pertinent

- to the investigation are recorded and/or collected in accordance with organisational and legislative procedures.
- 2.3 Procedures for continuity and *preservation of evidence* are followed in accordance with legislative requirements.
- 2.4 Appropriate *packaging* and identification techniques for the transportation of evidence for the purpose of laboratory testing are followed in accordance with organisational and legislative requirements.
- 3. Determine origin and cause of fire at incident**
- 3.1 Procedures required to determine the origin and *cause of fire* are followed.
- 3.2 *Specialist personnel* are liaised with to support determination of cause of fire.
- 3.3 Assistance is rendered to laboratory personnel and specialist organisations as required, in accordance with organisational procedures.
- 3.4 Physical evidence that can lead to the determination of the origin and cause of fire is identified and examined.
- 3.5 Preliminary findings are documented and validated in accordance with organisational procedures.
- 3.6 Origin and cause of fire are determined.
- 3.7 Findings, methodologies, support data and briefing notes are documented in accordance with organisational and legislative procedures.
- 4. Conduct analysis of incident**
- 4.1 Information relating to incident is gathered in accordance with organisational policies and procedures.
- 4.2 Information relating to incident is evaluated in accordance with organisational procedures.
- 5. Record and report information collected**
- 5.1 Information for a fire/incident investigation is recorded in accordance with the Rules of Evidence and legislative requirements.
- 5.2 Information collected for a fire/incident investigation is prepared and documented in a report in accordance with organisational requirements.
- 5.3 Report is submitted to supervisor in accordance with organisational requirements.
- 6. Prepare personnel for proceedings**
- 6.1 Briefings are participated in with counsel as required.
- 6.2 Other personnel involved in the proceedings are briefed as required.
- 6.3 Additional information and/or clarification of

fire/incident investigation procedures/findings are provided as required.

6.4 **Protocols for giving of evidence** at a coronial/civil/criminal proceeding are followed.

7. Review and evaluate fire/incident investigation

7.1 Outcomes of proceedings are reviewed to ensure knowledge of investigations, trends and precedents is current.

7.2 Changes to organisational policy and procedures arising from rulings and decisions are formulated and reported.

7.3 Fire/incident cause determination/documentation/recommendations are forwarded in accordance with organisational procedures.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- communicate effectively verbally and in writing
- conduct briefings
- cooperate with other organisations and community groups
- display evidence gathering techniques
- display evidence packaging techniques
- handle dangerous goods and hazardous substances
- record incident and investigation details

Required Knowledge

- collection of physical evidence
- determining point of origin by deductive evidence
- differences between fire conditions
- differing fire behaviour such as flashover, backdraught
- distinguishing between fires that are accidentally, negligently and deliberately or naturally lit
- examination of the fire scene
- factors affecting fire behaviour
- fatality and criminal involvement procedures
- identification of fire scene hazards
- legal implications of evidence collection and legislative requirements
- motives of the fire setter
- security of the scene, scene contamination and preservation
- use of personal protective clothing and equipment

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- secure the scene and preserve the evidence
- determine the point of origin and cause of fire
- distinguish between fires that are caused deliberately or accidentally, negligently and naturally lit
- collect evidence in accordance with legislative requirements
- record incident and investigation details in accordance with organisational procedures

Consistency in performance

Competency should be demonstrated over time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed on-the-job or via simulations or exercises.

Specific resources for assessment

Access is required to:

- relevant fire investigation equipment and resources
- real or simulated test fire sites (forest/rural)
- training building with appropriate fire investigation training rooms
- fire crews and pumpers
- thermal detection equipment
- appropriate protective clothing and equipment
- classrooms equipped with computers and appropriate training aids, text and reference materials
- appropriate role play scripts for the appropriate personnel (police, witnesses, barristers, solicitors, forensic scientist, insurance adjustors and investigators).

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training

environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment.

Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<p><i>Protocols for the cooperation and coordination of relevant organisations</i> may include:</p>	<ul style="list-style-type: none"> • advising and cooperating with other agencies • canvassing witnesses • collecting and securing physical evidence • collecting, collating and analysing information • conducting examinations • conducting interviews • making sketches and maps • preparing reports • producing information • taking notes
<p><i>Sources of information</i> may include:</p>	<ul style="list-style-type: none"> • correspondence • databases • incidence mapping • internet • inter-organisational activities • intra-organisational activities • journals

Evidence must include:	<ul style="list-style-type: none"> • debris • documents • drawings • electrical appliance/equipment • gas appliance/equipment • manifests • maps • personal notes • physical evidence • plans • sketches • soil
and may also include:	<ul style="list-style-type: none"> • audio tapes • video tapes
Methods and techniques of evidence and information collection must include:	<ul style="list-style-type: none"> • advising and cooperating with other agencies • canvassing witnesses • collecting and securing physical evidence • collecting, collating and analysing information • conducting examinations • conducting interviews • making sketches and maps • preparing reports • producing information • taking notes
Preservation of evidence must include:	<ul style="list-style-type: none"> • maintaining chain of evidence • maintaining log of events • tagging secure encasements
Packaging may include:	<ul style="list-style-type: none"> • glass receptacles • non-leaching bags • non-lined tins • rigid and non-rigid receptacles
Causes of fire must include:	<ul style="list-style-type: none"> • accidental • chemical • deliberate • electrical origin • environmental or natural occurrences • flammable liquids • gas • gas explosion • lightning • matches and lighters

	<ul style="list-style-type: none"> • mechanical defect • motor vehicles • smoking • spontaneous combustion
<i>Specialist personnel</i> may include:	<ul style="list-style-type: none"> • arson squad • crime scene police • forensic specialist • insurance investigators • laboratory technicians • lawyers • medical examiners • other relevant authorities
<i>Protocols for giving evidence</i> must include:	<ul style="list-style-type: none"> • court practices • court procedures • pre-court briefings • rules of evidence

Unit Sector(s)

Not applicable.

PUAFIR509B Implement prevention strategies

Modification History

Release	TP Version	Comments
2	PUA12 V2	Application of the Unit added Performance Criteria amended to make intent clearer but the intent has not changed Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to implement public safety risk prevention strategies which can be used to reduce the risk to the community.

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

Application of the Unit

This unit applies to personnel required to work with individuals and community groups to implement public safety risk prevention strategies within their area of responsibility.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Provide advice on prevention strategy

1.1 Public safety risk prevention strategies are identified taking into account available information on hazards and environmental conditions.

1.2 Assessment of public safety risk prevention strategies is conducted against ***organisational criteria***.

1.3 Advice is provided to ***local forums*** on public safety risk prevention strategies in accordance with ***organisational policy and procedures***.

1.4 Type of risk, locality, and protection of life, property and the environment are taken into account in advice provided.

2. Implement and monitor prevention strategies

2.1 Risk prevention activity is implemented in accordance with selected strategies.

2.2 Communication and coordination of prevention activities is implemented with ***relevant authorities and other responsible organisations***.

2.3 Progress reports are provided to ***stakeholders*** in line with organisational policies and procedures.

3. Review implementation of prevention strategies

3.1 Stakeholders are advised of the outcome of the implementation in line with organisational policies and procedures.

3.1 Recommendations are ***documented*** and provided to appropriate personnel as proposed amendments to prevention strategies.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- analyse needs
- communicate effectively verbally and in writing
- negotiate
- resolve conflicts

Required Knowledge

- emergency management concepts and principles
- legislative requirements relevant to emergency management
- organisational policies and procedures
- organisational documentation (emergency/disaster management plans, standard operating procedures, policies, procedures and guidelines)
- problem solving and decision making techniques
- relevant legislation, regulations and codes of practice
- source of risk (commercial and legal relationships, economic, human behaviour, individual activities, management activities and controls, natural events, political circumstances, technology/technical issues)
- techniques for the prioritisation and evaluation of public safety risk management systems

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- Effectively implement the selected public safety risk prevention strategy.
- Review the effectiveness of these strategies and provide feedback
- Ensure risk prevention strategies implemented by personnel are consistent with the organisation's community safety policy and approved arrangements.

Consistency in performance

Competency should be demonstrated over time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment**Context of assessment**

Competency should be assessed on-the-job or in a simulated workplace environment.

Specific resources for assessment

Access is required to:

- complex scenarios sufficient to allow evidence to be gathered from a variety of sources and stakeholders on more than one occasion and over an extended period.

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment.

Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Public safety risk prevention strategies may include:

- all aspects of comprehensive emergency management evolved from considering prevention/mitigation
- building codes
- community restoration
- critical incident stress management
- emergency management planning
- financial support

	<ul style="list-style-type: none"> • implementing plans • land use management • legislation and regulation • mobilising resources • mutual aid agreements • preparedness • prescribed burning • public education • response and recovery including safety standards • restoration and reconstruction • training and exercises • warning systems
<i>Assessment of public safety risk prevention strategies</i> may include:	<ul style="list-style-type: none"> • costs and benefits • deficiencies and limitations • determination of advantages • disadvantages
<i>Organisational criteria</i> may include:	<ul style="list-style-type: none"> • administrative efficiency • compatibility with other strategies • continuity of effects • effects on economy • effects on environment • effects on individual freedom • equity • jurisdictional authority • leverage for further vulnerability-reducing action, cost effectiveness • possibility of vulnerability creation • public and pressure group reaction • timing • vulnerability reduction potential
<i>Local forums</i> may include:	<ul style="list-style-type: none"> • community groups • local councils • local emergency management committees • schools
<i>Organisational policy and procedures</i> may include:	<ul style="list-style-type: none"> • legislation relevant to the organisation • legislation relevant to the public safety risk prevention strategies • operational, corporate and strategic plans • operational performance standards • organisational personnel practices and guidelines • organisational quality standards

	<ul style="list-style-type: none"> • standard operating procedures
<i>Communication</i> may include:	<ul style="list-style-type: none"> • electronic transmission of information • letters • meetings • small group or individual verbal communication
<i>Relevant authorities and other responsible organisations</i> may include:	<ul style="list-style-type: none"> • community service organisations • contractors • equipment suppliers • federal, state/territory and local government authorities • land management agencies • medical organisations • operative and support organisations • other emergency organisations • water, gas and power agencies • welfare and counselling organisations
<i>Stakeholders</i> may include:	<ul style="list-style-type: none"> • career and volunteer personnel • client groups • community groups • industry groups • members of parliament • members of the public • non-government organisations • public and private sector organisations • staff
<i>Documentation</i> may include:	<ul style="list-style-type: none"> • emergency procedures • evacuation procedures • organisational and workplace operating procedures and policies • relevant Australian or international disaster/emergency management documentation • risk and hazard analysis • standard operating procedures • work health and safety procedures

Unit Sector(s)

Not applicable.

PUALAW001B Protect and preserve incident scene

Modification History

Release	TP version	Comments
2	PUA12 V1	Layout adjusted. Application reviewed.
1	PUA00 V8.1	Primary release on TGA.

Unit Descriptor

This unit covers the competency required, on arrival at the scene of an accident or incident, to conduct initial assessment, take action to maintain public safety and preserve the scene, and note and record details and information.

The unit is particularly applicable in cases where organisation personnel are the first to arrive at the scene of an accident or incident.

Application of the Unit

This unit applies to all public safety workers at an incident who need to understand the importance of maintaining the legal integrity of the scene. It is not a specialist Crime Scene Investigation unit.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Secure and preserve scene	<p>1.1 Initial <i>assessment</i> is participated in to identify <i>factors which will impact</i> on public safety and scene preservation.</p> <p>1.2 <i>Incident/accident scene</i> is effectively secured to <i>preserve the scene</i> and maintain public safety in line with legislative requirements.</p>
2. Record and report details of incident scene	<p>2.1 <i>Details of the scene</i> are noted, <i>recorded and reported</i> according to organisation's policies and procedures.</p> <p>2.2 <i>Witness details</i> and information volunteered are recorded in accordance with <i>organisational and legislative requirements</i>.</p> <p>2.3 Information is communicated to <i>relevant personnel</i> in line with organisation's procedures.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- listening
- note taking
- observation
- questioning
- reporting

Required Knowledge

- legislative and organisation requirements relating to scene preservation

- methods of securing scene
- organisation requirements for taking witness details and information
- regulatory requirements for taking witness details and information
- techniques for estimating distance
- techniques for removing public from scene
- types of information which may assist in investigations

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Demonstrated ability to effectively secure scene and record and report details in accordance with the organisation's policies and procedures.

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Performance at an incident, exercise or simulation is required to demonstrate competence in this unit. Written or verbal questions may be used as supporting evidence.

Specific resources for assessment

No special requirements.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Incident scene may include:

- urban fire
- wild fire
- vehicle fire
- crime scene
- search for missing persons or evidence
- vehicle accident
- natural disaster
- industrial/mining accident
- incident involving death or injury to person or

- damage to property
 - urban scene
 - rural scene
 - indoor scene
 - outdoor scene
 - animal incident
 - marine
 - aircraft
 - train
 - explosions
 - hazardous materials
 - at scene
 - en route to and from scene
- Assessment of scene* may be conducted:
- Factors impacting* may include:
- public safety risk factors including factors that could impact on the safety of investigators
 - response team
 - the security/preservation of the actual site
 - the security and preservation of situational evidence
 - traffic
 - tactical factors affecting the quality of the investigation including environmental circumstances
 - chronology of events
 - access to scene
 - number of persons at scene
 - availability of support services
 - boundaries
 - incident scene specialists
 - forensic experts
 - potential witnesses
 - victims
 - other bystanders
 - personnel from other organisations
 - media
 - coroners
 - pathologists
 - medical practitioners
 - undertakers
 - forensic accountants
 - information technology consultants
 - legal officers
 - owners and/or occupiers
- Persons at scene* may include:

Security of scene may be affected by:

- topography
- climatic conditions
- human interference
- animal interference
- preservation of life/property
- structural integrity
- availability of personnel

Securing scene may include:

- removing non-emergency personnel from scene
- isolating scene
- erecting barriers

Details of scene may include:

- date
- time
- location
- damage
- persons present
- property involved
- possible causes
- items of evidence
- injuries
- status of utilities services such as broken water pipes
- animal species present
- flora
- fauna
- size and construction of building
- occupancy
- insurance details

Witness details may include:

- name
- contact details
- other details in accordance with organisation's policies and procedures

Relevant personnel may include:

- supervisor
- team leader
- police
- investigating officer
- other organisation's personnel

Communication may include:

- verbal
- completing standard forms
- written

Recording and reporting may include:

- taking notes
- completing standard forms
- making sketches

Preserving scene may include:

- taking photographs
- taping
- electronic videoing
- preserving evidence and the area of origin

Organisational and legislative requirements may vary between sectors and organisations and may include:

- legislation relevant to the operation/incident/response
- legislation relevant to the organisation
- operational
- corporate and strategic plans
- operational procedures
- operational performance standards
- organisation's personnel practices and guidelines
- organisation's quality standards

Unit Sector(s)

Not applicable.

PUALAW002B Conduct initial investigation at incident scene

Modification History

Release	TP version	Comments
2	PUA12 V1	Layout adjusted. Application revised.
1	PUA00 V8.1	Primary release on TGA.

Unit Descriptor

This unit covers the competency required to gather and collate information and obvious and accessible physical evidence from the scene of an incident and identifying potential witnesses.

Note: It does not cover the specialist skills required to interpret the evidence gathered, or the specialist skills required to gather specific evidence.

Application of the Unit

This unit applies to non-specialist workers who have been tasked with collection of information and evidence that is obvious at an incident. It does not apply to specialist relating to interpreting evidence gathered or gathering specific evidence.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Conduct initial assessment of scene

- 1.1 Scene is assessed with regard to occupational health and safety and all actions are undertaken in line with organisation's policies, procedures, guidelines and duty of care requirements.
- 1.2 Communication is established with the senior ***investigating officer*** and liaison is maintained throughout the investigation.
- 1.3 Circumstances surrounding the scene are ascertained from visual assessment and reports from other personnel.
- 1.4 Scene boundary is defined/redefined as required to preserve physical evidence for collection.
- 1.5 Obvious and accessible ***physical evidence*** is located and, where appropriate, protected from possible contamination.

2. Control integrity of scene

- 2.1 Appropriate ***arrangements for scene access and egress*** are established and maintained.
- 2.2 All non-essential persons are removed from the scene and relevant details are recorded accurately and legibly in accordance with organisation and regulatory procedures.
- 2.3 ***Additional resources*** are identified and accessed to secure incident scene.
- 2.4 The personal and health and safety needs of those involved in the incident are attended to.

3. Examine scene

- 3.1 An appropriate search pattern is instigated in accordance with instructions from senior investigating officer to ensure all evidence is located and preserved.
- 3.2 ***Details of the scene*** are recorded comprehensively

ELEMENT	PERFORMANCE CRITERIA
4. Identify potential witnesses and initial statements recorded	<p>and accurately in line with organisation's operating procedures.</p> <p>3.3 Evidence is located, collected, packaged, labelled and stored to ensure preservation for further post-scene examination.</p> <p>3.4 An accurate log of all evidence is maintained.</p> <p>3.5 Scenes are correctly assessed for future investigative requirements and appropriate persons notified.</p> <p>4.1 Bystanders are canvassed to identify potential witnesses.</p> <p>4.2 Details of potential witnesses are recorded.</p> <p>4.3 Appropriate recording practices are used that are in accordance with legislative and regulatory requirements and organisation's policies and procedures.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- accurate written recording and compilation of interviews and statements
- attention to detail
- implementing methodical and systematic approach
- listening to bystanders
- putting bystanders at ease
- questioning bystanders
- use of recording and specialised evidence collection equipment
- working with a variety of professionals

Required Knowledge

- anti discrimination public safety
- appropriate use of interpreting services
- collection and recording of various types of evidence ranging from large objects to minute traces
- details of scene
- equal employment opportunity
- features and use of a variety of specialised equipment to search
- functions and roles of other professionals and experts
- incident scene protection and preservation

- indicators of emotional distress
- indicators of need for specialised investigations
- legislative requirements relating to occupational health and safety
- policies and procedures relating to occupational health and safety
- policies and procedures relating to recording details of persons
- public safety and duty of care at accident/incident scene
- recognition
- record and collect evidence
- shock
- taking and compiling statements
- taking of statements

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Correct application of legislative requirements and organisation policies and procedures in all situations.

Consistency in performance

Evidence will need to be gathered over time in a range of actual and/or simulated environment.

Context of and specific resources for assessment

Context of assessment

A real life incident, exercise or simulation, or series of tasks are required to demonstrate competence in this unit. This may involve setting scenarios to be completed either individually or as a member of a team.

Specific resources for assessment

No special requirements.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Initial investigation:

- those enquiries conducted by the first public safety official on scene

Incident scene may include:

- structural fire
- wild fire

- vehicle fire
 - crime scene
 - vehicle accident
 - natural disaster
 - industrial/mining accidents and incidents
 - accident/incident involving death or injury to person or damage to property
- Incident scene*** may be:
- indoor or outdoor
 - in a rural or urban environment
- Incident scene*** may be affected by:
- prevailing weather and require additional resources to preserve and protect incident scene
- Security of an incident scene*** may be affected by:
- topography
 - climatic conditions
 - human interference
 - animal interference
 - preservation of life/property
- Public safety risk factors*** include:
- those factors at the incident scene that could impact on: the safety of investigators; the security/preservation of the actual site
 - the security and preservation of situational evidence
- Investigating incident scenes*** may include:
- dangerous or distasteful conditions and may involve handling injured or deceased persons
- Circumstances surrounding scene*** may include:
- sequence of events
 - possible causes
 - people involved
 - property involved
 - victims
 - suspects
 - witnesses
 - damage
 - injury
 - organisation personnel involved
 - other agencies involved
 - current status of investigation
 - action taken to date
- Tactical factors*** may include:
- environmental circumstances
 - chronology of events
 - access to scene
 - number of persons at scene
 - availability of support services
 - boundaries

Persons at incident scene
may include:

- Incident scene specialists and forensic experts; witnesses
- victims
- other bystanders; police and emergency services; media; coroners
- pathologists
- medical practitioners
- undertakers; forensic accountants
- information technology consultants and legal officers

Activities at incident scenes
may be recorded by:

- running sheets
- exhibit logs
- receipts and personnel movement
- video photography

Physical evidence may
include:

- shoe impressions
- tyre prints
- skid marks
- fingerprints
- containers
- fibres
- flammable and combustible liquids
- tool marks
- bloodstains
- identifying numbers
- bodily fluids
- burn patterns

Methods of collection may
include:

- vacuuming
- tape lifts
- shovelling
- photographing
- casing

Methods of packaging may
include:

- metal containers
- plastic bags
- paper bags
- glass vials

Additional resources may
include:

- organisation personnel
- other organisation personnel
- expert personnel
- audio visual services
- emergency lighting
- forensic personnel

- Relevant details from persons*** may include:
- name
 - contact details
 - other details in accordance with standard operating procedures
- Liaison with investigating officer*** may include:
- professional and technical advice
 - identification of avenues of inquiry
 - significance of located evidence
- Arrangements for scene access and egress:***
- clear brief as to who has control of access
 - physical barriers may also be required
 - roster guards
 - limit entry to essential personnel
 - delegation of authority to control entry
 - record all persons who enter or depart the scene and reasons
- Arrangements to protect integrity of evidence:***
- roster scene guards
 - cover evidence
 - may require removal of evidence to ensure its protection
- Details of scene:***
- time
 - date
 - location
 - damage to property
 - injury to persons
 - personnel present
 - physical details of scene
 - evidence

Unit Sector(s)

Not applicable.

PUAOHS002B Maintain safety at an incident scene

Modification History

Release	TP version	Comments
3	PUA12 V2.1	Editorial changes.
2	PUA12 V1	Layout adjusted. Application revised.
1	PUA00 V8.1	Primary release on TGA.

Unit Descriptor

This unit covers the competency to recognise potential health and safety risks and take action to eliminate or control those risks at incident scenes, to prevent injury to self, other personnel or members of the public.

Application of the Unit

This unit applies to all public safety workers attending an incident scene, and links to the individual's responsibility to maintain personal safety and to be aware of how actions affect the safety of others, including team members, other agency workers, and general public.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR215 Prevent Injury (Fire sector specific)

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the Performance Criteria describe the required performance

essential outcomes of a Unit of Competency.

needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine hazards at incident site	<p>1.1 Issues affecting safety of self and other personnel are established by identification of <i>hazards</i> and assessment of <i>risks</i>, and by liaison with others at the scene.</p> <p>1.2 Relevant operational safety procedures are implemented in accordance with organisation's policies.</p> <p>1.3 Duties are undertaken in line with organisational health and safety codes of practice and <i>relevant legislation</i>.</p>
2. Implement hazard controls at incident scene	<p>2.1 Hazards are identified and mitigation procedures are selected in line with work instructions and procedures.</p> <p>2.2 Hazardous situations rectified where possible and reported and/or recorded according to organisation's policies and procedures.</p> <p>2.3 Changes in situation and/or conditions are reported immediately to <i>designated person</i>.</p> <p>2.4 <i>Hazard controls</i> are monitored and communicated to relevant personnel to ensure continuing effectiveness.</p> <p>2.5 Hazard control and mitigation measures are implemented with minimum damage to the environment, while maintaining safety of self and others.</p> <p>2.6 Incident/accident scene is effectively secured to preserve the scene and maintain <i>public safety</i> in line with legislative requirements.</p>
3. Maintain personal safety	<p>3.1 <i>Personal protective clothing and equipment</i> is selected and checked according to organisational procedures to ensure it is operational prior to entry into incident situation.</p> <p>3.2 Personal protective clothing and equipment</p>

ELEMENT	PERFORMANCE CRITERIA
4. Contribute to maintaining safety of other work group members	<p>appropriate to dealing with the hazard is worn/fitted and used in accordance with organisation's policies and procedures and manufacturer's guidelines.</p> <p>3.3 Water and food intake, rest breaks and shelter requirements are maintained.</p> <p>3.4 <i>Survival technique strategies</i> are implemented in accordance with organisation's policies and guidelines.</p> <p>4.1 Impact of own actions on safety of others is recognised.</p> <p>4.2 Contact is maintained at all times with other work group members.</p> <p>4.3 Signals are correctly used, interpreted, confirmed and acted upon in a timely manner.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- communicate non-verbally and verbally
- follow procedures and instructions
- record information
- use communication equipment
- work with others in a team situation

Required Knowledge

- accidents and incidents
- commonly encountered hazards and procedures and safety precautions to prevent injury on encountering various hazards
- employee responsibilities and obligations
- food intake
- hazards
- heat induced illness - factors leading to prevention
- injuries
- labelling and storage of hazardous substances
- manual handling hazards
- means of relaying warnings to other personnel
- methods of hazard control and reporting
- organisation's occupational health and safety policy

- problems associated with insufficient water intake
- procedures for investigating injuries
- procedures for participating in occupational health and safety arrangements
- procedures for reporting hazards
- protection
- relevant standard operating procedures
- respiratory system - functions
- rest breaks
- State and Territory occupational health and safety requirements
- survival techniques for various situations
- symptoms and treatment
- techniques and aids
- use and limitations of relevant protective clothing and equipment

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence be demonstrated in maintaining personal safety and safety of others.

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

A real life incident, exercise or simulation, or series of tasks are required to demonstrate competence in this unit. This may involve setting scenarios to be completed either individually or as a member of a team. Written or verbal questions may be used as supporting evidence.

Specific resources for assessment

A range of protective clothing and equipment may be required.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Working environment** may be:
- hazardous
 - unpredictable
 - subject to time pressure
 - chaotic and expose responders to risk
- Public Safety workplaces** include:
- any location where a Public Safety incident occurs
- Response situation** include:
- single and multi agency response situations
- Hazards** include:
- all potential sources of injury or damage to property or the environment including identified and potential hazards to persons
 - equipment or the environment
- Risk** is:
- the likelihood of injury or damage occurring and the potential consequences of any injury or damage
- Incidents** may include:
- a variety of natural or man made events including but not limited to rescues and extrications
 - flood
 - storm
 - tempest
 - natural disaster
 - vehicle
 - aircraft
 - rail
 - industrial
 - civil defence
 - fires:
 - structural
 - wild
 - prescribed burning
 - search and rescue :
 - urban
 - rural
 - sea
 - hazardous materials and dangerous goods
- Hazards** may be identified by:
- scene assessment
 - visual inspections
 - plan reviews
 - recognising hazard warnings
 - accessing data bases
 - interviewing others at scene
 - seeking expert advice

- Others at scene*** may include:
- organisational personnel
 - personnel from other organisations
 - general public
- Hazardous materials*** may include:
- thermal
 - mechanical
 - explosives
 - toxic
 - corrosive
 - asphyxiant
 - radiation
 - etiological hazards
 - mutagenic materials
- Biological hazards*** may include:
- bacteria
 - viruses
 - fungi and yeasts
 - including exotic organisms
- Physical hazards*** may include:
- noise
 - slippery surfaces
 - poor visibility
 - smoky environments
 - fallen/falling objects
 - fatigue
- Electrical hazards*** may include:
- pole fires
 - electrical fires
 - electricity in damaged/burning structures
 - energised vehicles/structures due to downed wires
 - photovoltaic generation systems
- Manual handling hazards*** may include:
- heavy objects
 - content and shape of containers
- Environmental hazards*** may include:
- temperature
 - darkness
 - fire
 - snow
 - floods
 - winds
 - rain
 - hail
 - flora
 - fauna
 - postural restrictions and access
 - terrain

Hazard control measures

may include:

- traffic
- erection of barriers
- establishment of control zone
- use of spill clean up kits
- use of electrically insulated tools and equipment
- vehicle protection hoses and devices
- life support equipment (heat radiation shielded crew cabin
- vehicle cabins with/without sprays)
- entry control procedures to hazardous areas
- decontamination
- isolation of electricity supply

Relevant legislation may include:

- state or territory occupational health and safety acts and regulations

Personal protective clothing and equipment may include:

- breathing apparatus
- personal lines
- air lines
- personal distress units
- respiratory protection
- protective hoods
- goggles
- hearing protectors
- sunscreen
- chemical protective clothing
- personal flotation devices
- wet suits
- turnout uniform
- gloves
- hard hat
- safety boots
- overalls
- chainsaw chaps
- bullet proof vests
- firearms
- batons
- handcuffs

Hazard control equipment may include:

- atmospheric monitoring equipment
- meteorological equipment
- radiation monitoring equipment
- oxygen meters
- flammable gas detectors

- Reporting*** may include:
- verbal
 - written reports
 - completing standard forms
 - logs
 - sitreps
 - note taking
 - logging entry to hazardous areas
- Designated person*** may include:
- supervisor
 - team leader
 - workplace occupational health and safety representative
 - officer in charge
- Survival strategies*** which may be applied in:
- buildings
 - wildfire situations
 - water
 - extreme heat or cold
- Factors which may require monitoring*** may include:
- traffic
 - weather conditions
 - vegetation type
 - spectators
 - temperature
 - structural integrity
 - relative humidity
 - slope
 - terrain
 - water supply/pressure
 - fire development
 - stream flows
 - suspect atmospheres
- Contact with other personnel*** may include:
- visual
 - vocal
 - touch
 - radio
 - audible warnings
 - signalling

Unit Sector(s)

Not applicable.

PUAOPE001B Supervise response

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the competency to supervise a response by a small team to incidents and may include the use of aircraft, which are time critical and/or potentially threatening to life, property or the environment.

The unit includes the competency to proceed to the incident, assess the incident, and plan and implement an operational response and post-response activities.

Application of the Unit

Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s	PUAFIR302B Suppress urban fire OR PUAFIR303B Suppress wildfire (Fire specific)
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Employability Skills Information

Employability Skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Receive incident response request	<p>1.1 Requests for response are received and dealt with in accordance with <i>organisational policy</i> and guidelines</p> <p>1.2 Relevant incident information is obtained and assessed to enable personnel to make appropriate preparations</p> <p>1.3 An appropriate response is determined according to the type of incident and information available in accordance with organisational policies and procedures</p> <p>1.4 The location of the incident and the most appropriate route to the incident are ascertained</p>
2. Proceed to incident	<p>2.1 Personnel, equipment and <i>transport</i> resources are dispatched promptly, consistent with the nature of the incident and the information available</p> <p>2.2 Communication is established and maintained</p> <p>2.3 An appropriate route to the incident is followed</p>

ELEMENT**PERFORMANCE CRITERIA****3. Assess the incident**

- to minimise response time
- 2.4 *En-route hazards* are recognised and negotiated to minimise risk
- 2.5 Multi-vehicle response is conducted in accordance with the organisation's procedures
- 3.1 Observations are made en route to assist with *incident* assessments
- 3.2 Assigned personnel's arrival at the incident is confirmed according to organisational policies and procedures
- 3.3 *Communication* with on-site personnel is established
- 3.4 An initial assessment of the incident is carried out promptly
- 3.5 *Hazards* or potential hazards are assessed and minimised or controlled
- 3.6 Assigned *resources* to deal with the incident are established at the earliest opportunity
- 3.7 The need for additional resources is identified and resources requested in accordance with organisational policy and procedures
- 3.8 Hazards are monitored during the incidents and changes in the situation acted upon

4. Plan and implement an operational response to the incident

- 4.1 A safe and effective operational environment is established and maintained in accordance with occupational health and safety guidelines and organisation's policies and procedures
- 4.2 Incident information is communicated to assigned personnel clearly, accurately and in a timely manner
- 4.3 *Incident plan* is developed based on available information and organisational procedures
- 4.4 Strategies and tactics are determined and tasks allocated to appropriate personnel
- 4.5 An incident plan is implemented, continually monitored, reported and reviewed in the light of additional information and communicated in accordance with the organisation's policies and procedures
- 4.6 Leadership and supervision are provided to ensure that performance and practice are to operational standards

ELEMENT	PERFORMANCE CRITERIA
5. Conclude operation	<p>4.7 Appropriate equipment and materials are deployed to deal with the incident</p> <p>4.8 Changes in the incident plan are communicated to relevant personnel and organisations</p> <p>5.1 Incident is terminated in accordance with the organisation's procedures</p> <p>5.2 Incident records of incident actions and decisions are maintained in accordance with the organisation's requirements</p> <p>5.3 Incident assessment is conducted in accordance with the organisation's requirements</p>
6. Supervise post-response activities	<p>6.1 Equipment cleaning, repair, storage and replenishment is supervised</p> <p>6.2 Debriefing requirements are met</p> <p>6.3 Post operation reports are prepared to organisation's requirements</p> <p>6.4 <i>Welfare of team members</i> is monitored and appropriate action taken</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- analyse an incident
- assess risks and apply safe work practices
- communicate effectively
- conduct an incident assessment
- conduct briefings and debriefings for aircraft based work
- deploy personnel and equipment to deal with the incident
- for aircraft based work the ability to work in an aircraft for an extended period
- make decisions
- respond promptly to an incident
- use communication equipment

Required Knowledge

REQUIRED SKILLS AND KNOWLEDGE

- hazards/potential hazards and their effects
- knowledge of current navigational practices to perform navigation
- knowledge of current practices to perform conduct briefings and debriefings
- organisational policies and procedures relating to operations

Evidence Guide

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence be demonstrated in implementation of an appropriate strategy to deal effectively with the incident

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

Context of and specific resources for assessment

Context of assessment

Evidence of competent performance should be obtained by observing an individual in responding to and dealing with an actual or simulated incident operation and supplemented by appropriate questions

Specific resources for assessment

Assessment of this competency will require access to relevant transport, communication and emergency equipment

Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

Range Statement

RANGE STATEMENT

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Incidents may include	fires public disorder crime flood storms accident hazardous materials incidents rescues
Transport may include	on-road off-road aviation maritime
En route hazards may include	smoke crowds traffic unauthorised redirection prevailing weather road conditions terrain debris tidal flow spot fires restricted areas wires masts/aerials other aircraft interference to communications
Hazardous conditions may include	adverse weather and fire behaviour

RANGE STATEMENT

Incident assessment may include

after-dark operations
difficult terrain
dangerous goods and substances
time pressure
level of visibility
structural collapse
type and size of incident
risk to life
property and environment
hazards/no go areas
climatic and weather conditions
capability of assigned personnel
adequacy of allocated equipment
information gathered from existing plans/databases
forecasts and meteorological profiles
crowds gathering
installed fire protection
type of building
building construction
persons trapped
exposures
access

Resources may include

aircraft (rotary and fixed wing)
personnel trained for the task
specialised personnel
protective clothing
equipment
materials
navigation aids
maps
aide memoirs
pumps

RANGE STATEMENT

Communications equipment may include	appliances specialist appliances radio (eg VHF aeronautical) telephone computer facsimile pager mobile data terminal audible alarms/whistles
Communications may include	ground to air hand signals distress signal units whistles verbal and written instructions radio telephone mobile phone
Incidents may include	life threatening situations protection of property and the environment armed offenders explosive devices
Incident plan may include	incident objectives or goals roles and responsibilities of personnel resource requirements and limitations communication procedures strategies and tactics to be employed contingency arrangements planning checklists flight plans emergency landing areas for aircraft
Welfare of team members	physical stress

RANGE STATEMENT**may include**

physiological stress
 physical needs such as refreshments
 fatigue
 relief

Organisational policy, procedures, requirements and guidelines may vary between sectors and organisations and may include

legislation relevant to the operation/incident/response
 legislation relevant to the organisation
 operational
 corporate and strategic plans
 operational procedures
 operational performance standards
 organisational personnel practices and guidelines
 organisational quality standards
 interagency liaison
 Civil Aviation Orders and requirements
 search and rescue time/procedures/action
 incident management systems

When dealing with aircraft response, performance may be affected by

task
 range
 engine type-piston
 turbine
 wing configuration
 twin/single engine
 load capacity
 airstrip length requirements
 pilot ability
 weather
 fire behaviour
 terrain

When dealing with aircraft, suitability may be affected by

visibility
 range
 speed

RANGE STATEMENT

When dealing with aircraft, supervising of aircraft management procedures includes

take off capability
communications system availability
pilot local knowledge
temporary restricted airspace
aircraft separation-vertically and horizontally
height separation
direction
inbound/outbound calls
Fire Common Traffic Advisory Frequency (F-CTAF)

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil

PUAOPE002B Operate communications systems and equipment

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the competency to transmit and receive communications in routine and operational situations using the organisation's communication systems and equipment.

Application of the Unit

Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s

Nil

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Use communication systems and equipment

1.1 Equipment is used and operated safely to support communications consistent with organisation's policies and procedures

1.2 **Communication equipment** and techniques are selected to best meet the task, context and needs of the situation

1.3 The **communication system** is correctly utilised to facilitate transmission and reception

1.4 Communication systems are operationally maintained according to organisation's policies and procedures

2. Transmit and receive communications

2.1 Information is transmitted concisely and clearly to facilitate accurate reception of the message in accordance with organisation's policy and procedures

2.2 Contact is acknowledged, communication is confirmed and action initiated

2.3 Communication faults and deficiencies are reported according to organisation's policy and procedures

2.4 Alternative communication strategies are employed according to organisational procedures to address identified faults and deficiencies in communication

ELEMENT**PERFORMANCE CRITERIA****3. Maintain communications equipment**

- 2.5 Communication is processed and recorded in accordance with organisation's policies and procedures
- 3.1 Fault finding techniques are applied and basic maintenance conducted according to organisational policies and procedures
- 3.2 Faulty equipment is identified and noted for repair

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- clean and service communication equipment according to organisational procedures
- report communication faults and deficiencies according to organisational procedures
- use verbal communication procedures consistent with the organisation's communication system
- utilise the organisation's communication processes and systems

Required Knowledge

- organisational policy and procedures relevant to the operation of communication equipment
- range of communication equipment available to the organisation
- the organisation's communication system

Evidence Guide**EVIDENCE GUIDE****Critical aspects for assessment and evidence**

It is essential for this unit that competency be demonstrated in accurately transmitting and receiving

EVIDENCE GUIDE

required to demonstrate competency in this unit

communications using the organisation's communication system and equipment

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

Context of and specific resources for assessment

Context of assessment

Observation of the use of a range of communication equipment under non-operational and operational conditions or in a simulated environment

Specific resources for assessment

Access to relevant communication equipment

Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

Range Statement

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Communication equipment may include

personal computers and modems
radio
facsimiles
signalling devices
mobile
landline and satellite telephones
pagers

Communication systems may include

organisation's networks
communication protocols
verbal communication procedures

RANGE STATEMENT

Verbal communication procedures may include

geographical information systems
relevant legislation such as Telecommunications Act
pro-words
phonetic alphabet
call signs
coded messages
use of abbreviations
emergency procedures

Voice procedures may include

rhythm
speed
volume
pitch
sentences
correcting mistakes
repetitions

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil

PUAOPE005B Manage a multi team response

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the competency to manage a multi team response to incidents which may be time critical and/or potentially threatening to life, property or the environment.

Application of the Unit

Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s

PUAOPE001B Supervise response (Fire specific)

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Conduct an assessment of incident

- 1.1 A risk assessment of all factors impacting upon the response is conducted
- 1.2 An initial assessment of *resources* required is conducted
- 1.3 Resources required to deal with the incident are identified
- 1.4 *Constraints* which may impede the response are identified
- 1.5 *Initial response options* are identified and assessed

2. Establish control and command

- 2.1 Control is assumed in accordance with the organisation's policies and procedures
- 2.2 *Communication systems* are activated in accordance with organisation's policies and procedures
- 2.3 Reporting processes are activated in accordance with organisational policies and procedures to provide continuous monitoring and evaluation of incident
- 2.4 *Command and control facilities* are established

3. Develop operational plan

- 3.1 *Operational plan* is developed and adjusted if required in accordance with response requirements and operational guidelines

ELEMENT	PERFORMANCE CRITERIA
4. Implement operational plan	<p>3.2 Response strategies are identified</p> <p>3.3 Tactics to effectively manage the incident are identified in accordance with the operational plan</p> <p>3.4 Tasks are determined and prioritised</p> <p>4.1 Operational plan is communicated to teams in accordance with the organisation's guidelines</p> <p>4.2 Resources are deployed to ensure that the operational plan is implemented in accordance with organisation guidelines</p> <p>4.3 Operations are conducted and monitored in accordance with the operational plan</p> <p>4.4 Operational reports are issued in accordance with <i>policy and procedures</i></p> <p>4.5 Operations are modified as required by the situation</p> <p>4.6 Resources are requested, acquired and deployed</p>
5. Manage post incident operations	<p>5.1 Resources are accounted for and demobilised in accordance with organisational policies and procedures</p> <p>5.2 Post operational <i>documentation</i> is completed to organisational requirements</p> <p>5.3 Post incident recovery is initiated in accordance with the organisation's policies and procedures</p> <p>5.4 Effectiveness of operations is evaluated and documented</p> <p>5.5 Debriefing conducted in accordance with organisational guidelines</p> <p>5.6 Recommendations are made for changes in policies and procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- accessing information and support from the control facility

REQUIRED SKILLS AND KNOWLEDGE

- development of response plans including predicting consequences and identifying improvements
- effective and efficient deployment of human and physical resources including:
 - electronic data exchange systems etc.
 - equipment and consumables
 - identification and correct use of equipment
 - materials
 - other organisations
 - personnel
 - personnel and external authorities
 - processes and procedures
 - radio frequency devices
 - team and personnel management
 - team dynamics
- use of a range of information technology devices including computers
- using tools and techniques to solve problems

Required Knowledge

- codes of practice or other legislative requirements
- current principles and practices in response activities
- display of the following knowledge and skills in terms of job role or function:
 - emergency management plans
 - emergency site layout
 - focus of operation of work systems and equipment
 - legislation
 - organisational command structure
 - relevant agreements
 - roles and responsibilities of all organisations
 - security and confidentiality of material

Evidence Guide

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate

It is essential for this unit that competence be demonstrated in assessment of incident both functionally and strategically; development of a plan

EVIDENCE GUIDE

competency in this unit

and implementation of response in accordance with the organisation's policies and procedures.

Strategic reaction to changes within the emergency environment

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

Context of and specific resources for assessment

Context of assessment

Assessment may occur in an operational environment or in an industry-approved simulated work environment

Specific resources for assessment

Resources should involve access to, or simulation of, emergency situations in a multi-team response environment.

This includes resources relating to: equipment, personnel, facilities etc appropriate to the emergency situation and within the bounds of responsibility as designated within the requirements of control

Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

Range Statement

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Initial response options will be determined by

the availability of resources and estimated outcome
organisational guidelines
regulatory authorities
legislative requirements

Risks to life and property

fire

RANGE STATEMENT**may include**

flood
 hazardous materials
 landslip
 severe storm
 biological agents
 fauna rescue

Transport may include

on road
 off road
 aviation
 maritime
 rail

Command facility may include

field facility such as an existing airfield helipads or established operations centre

En route hazards may include

traffic
 prevailing weather
 road conditions
 terrain
 debris
 plumes
 animals
 atmospheric hazards
 tidal conditions
 restricted areas
 wires/masts/aerials
 other aircraft
 interference communications

Hazardous conditions may include

adverse weather
 after dark operations
 difficult terrain
 dangerous goods and substances
 time pressure

RANGE STATEMENT

Incident assessment may include	visibility type of incident risk to life property and environment hazards capability of assigned personnel adequacy of allocated equipment information gathered from existing plans/databases forecasts meteorological profiles
Communications systems may include	radio telephone computer facsimile pager mobile data terminal satellite signalling signage warnings
Incidents may include	life threatening situations protection of property and the environment
Constraints may include	legislative resources time prevailing weather restrictions on duration of work or the conditions under which personnel may be employed constraints on road closure redirection of water course military areas

RANGE STATEMENT

	Aboriginal and Torres Strait Islander sacred sites
	other areas of environmental and cultural significance
	seasonal factors
	wilderness areas
	hazardous areas
	other areas requiring permission and/or authorisation to enter
	existing emergency management plans
	financial
Documentation and reporting requirements may include	input to debriefs
	completion of logs
	sitreps
	journal records
	assessment of safety procedures utilised
	financial statements
	post-operational report
Resources may include	human -
	<ul style="list-style-type: none">• operations personnel• volunteers• support personnel
	local, federal and state/territory governments
	physical - equipment
	machinery
	vehicles
	technology devices
	communication devices
	equipment characteristics
	support services
	amenities
	parking
	safety equipment
	aircraft

RANGE STATEMENT**Command facility establishment procedures and principles may include**

personnel
 specialised personnel such as aviation authorities
 equipment
 material
 proximity to incident
 size and type of structure
 special incident requirements
 communication modes
 topography
 environment
 climatic conditions
 logistical operations
 site access and exit requirements
 security arrangements

Monitoring of operations may include

progress against plan
 welfare of personnel
 utilisation of resources and potential of incident

Organisational policy, procedures, requirements and guidelines may vary between sectors and organisations and may include

legislation relevant to the operation/incident/response
 legislation relevant to the organisation
 operational
 corporate and strategic plans
 operational procedures
 operational performance standards
 organisational personnel practices and guidelines
 organisational quality standards
 Civil Aviation Orders
 search and rescue time
 procedures/action

Operational plan may include

aims and objectives of the response/incident/operation
 possible strategies to achieve objectives
 possible tactics to implement strategies

RANGE STATEMENT

Operational plan may include	resources required including their availability limitations contingencies and alternatives monitoring and evaluative procedures reporting requirements pre-plans flight plans consideration or aircraft type performance and suitability document (formal or informal) part of an overall plan cover one or more place area or region
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Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil

PUAOPE007B Command agency personnel within a multi-agency emergency response

Modification History

Release	TP version	Comments
3	PUA12 V2.1	Editorial changes.
2	PUA12 V1	Layout adjusted. Application revised.
1	PUA00 V8.1	Primary release on TGA.

Unit Descriptor

This unit covers the competence to command an organisation's personnel within a multi-agency emergency response environment.

Command is the internal direction of the members and resources of an organisation in the performance of the organisation's roles and tasks by agreement or in accordance with relevant legislation. Command operates vertically within an organisation.

Application of the Unit

This unit applies to Public Safety personnel who have a command role within their own organisation and are required to administer that command in a multi-agency response environment. It does not include the requirement to administer command of personnel from other agencies in a multi-agency response.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAOPE021A Control a Level 1 incident

PUAOPE015A Conduct briefings and debriefings (Fire sector specific)

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Take command

- 1.1 Command is exercised in accordance with organisation authority and guidelines.
- 1.2 The identity, location and contact details of the commander are communicated to internal personnel and to relevant external authorities/organisations/individuals pertinent to the emergency/incident.

2. Establish a command facility

- 2.1 An appropriate ***command facility*** is established and operated in accordance with organisational guidelines.
- 2.2 Details of the facility are communicated to internal personnel and to relevant external authorities/organisations/individuals as required.

3. Establish a command structure

- 3.1 A command structure is established appropriate to the nature and complexity of the task (s) undertaken by the organisation.
- 3.2 The command structure is expanded, contracted or modified in response to changes within the emergency environment.

4. Establish procedures to permit command to be exercised

- 4.1 Command structure is communicated to internal personnel and external authorities/individuals whom may have a regulatory interest applicable to the emergency/incident.
- 4.2 Command ***information management system*** is implemented.
- 4.3 Communication mechanisms and procedures are

ELEMENT	PERFORMANCE CRITERIA
	implemented between levels of command in accordance with organisational guidelines.
	4.4 Liaison is established and maintained to meet control and command requirements.
	4.5 A public information system is established in accordance with control plan requirements.
5. Determine operational command plan	5.1 Tasks are received and/or determined in accordance with the control requirements.
	5.2 Operational command plan to implement strategies is developed and modified as required in accordance with organisational guidelines.
	5.3 Appropriate tactics to effectively manage the emergency/incident are identified in accordance with the operational command plan.
6. Manage resources under organisation command	6.1 Resources are deployed to ensure that the operational command plan is implemented in accordance with organisational guidelines.
	6.2 Human and physical resources are effectively managed to achieve command plan outcomes.
7. Manage operation(s)	7.1 Operations are conducted in accordance with the operational command plan.
	7.2 Significant changes in status and actions taken are reported consistent with organisational policy and procedures.
	7.3 Operations are redirected as required to meet changes in the conditions which affect the emergency/incident situation.
8. Conclude operation(s)	8.1 Physical, human and capital resources are accounted for in accordance with organisational guidelines.
	8.2 Debriefing requirements are met in accordance with organisational guidelines.
	8.3 Operational documentation is completed to organisation standards.
	8.4 Reports are produced as required.
9. Review operations	9.1 Plans and guidelines are evaluated and reviewed.
	9.2 Effectiveness of command and interaction with control is evaluated and documented.
	9.3 Reports are produced and communicated in accordance with established protocols.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- accessing information and support from the control facility, other organisations' personnel and external authorities
- analyse emergency situations both functionally and strategically
- development of response plans including predicting consequences and identifying improvements
- effective and efficient deployment of human and physical resources including:
 - operative and non-operative personnel
 - materials
 - equipment and consumables
- effective deployment, monitoring and communication of organisation allocated task(s)
- identification and correct use of equipment
- implement response in accordance with organisational procedures and within bounds of authority
- incorporate risk management and contingency processes
- liaise effectively with emergency controller
- operation of work systems and equipment
- processes and procedures
- secure emergency/operations site
- select, prioritise, implement and evaluate appropriate strategies
- strategically react to changes within the emergency environment
- using a range of information technology devices including:
 - computers
 - radio frequency devices
 - electronic data exchange systems etc
- using tools and techniques to solve problems

Required Knowledge

- applications of relevant agreements
- code of practice or other legislative requirements
- emergency site layout
- identification and correct use of equipment
- knowledge of current principles and practices to conduct an activity which exercises elements of public safety management
- organisational command structure
- processes and procedures
- security and confidentiality of material

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence be demonstrated in:

- Effective deployment, monitoring and communication of organisation allocated task(s)
- analysis of emergency situations both functionally and strategically
- selection, prioritisation, implementation and evaluation of appropriate strategies
- implementation of response in accordance with organisational procedures and within bounds of authority
- securing emergency/operations site
- strategic reaction to changes within the emergency environment,
- incorporation of risk management and contingency processes
- effective liaison with emergency controller and
- logging and recording all actions and decisions

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Assessment may occur in an operational environment or in an industry-approved simulated work environment.

Specific resources for assessment

Resources should involve access to or simulation of emergency situations in a multi-organisation response environment. This includes resources relating to: equipment, personnel, facilities etc appropriate to the emergency situation and within the bounds of responsibility as designated within the requirements of control.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for

different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Types of emergencies (imminent or actual) may include:

- natural events
- drought
- fire (forest
- range
- urban)
- avalanche snow/ice/hail
- tsunami
- windstorm/tropical storm
- hurricane/typhoon
- biological
- extreme heat/cold
- flood/wind driven water
- earthquakes/land shifts
- volcanic eruption
- tornado/cyclone
- landslide/mudslide
- dust/sand storms
- lightning storm
- search and rescue
- fauna rescues e.g. marine life rescue

Technological/industrial events may include:

- radiological accidents
- dam/levee failure
- fuel/resource shortages
- hazardous material releases
- explosions/fire
- transportation accidents
- building/structure collapse
- power/utility failure
- extreme air pollution
- strikes
- business interruption
- financial collapse

Civil/political events may include:

- economic
- general strike
- terrorism
- sabotage
- hostage situation(s)
- civil unrest
- eco-terrorism
- enemy attack

Considerations in the determination of the nature, extent and potential of an emergency may include:

- risk to life
- risk to property
- risk to environment
- scope and scale of incident including likely duration of incident
- resource availability
- potential for changes in situation
- topography
- weather
- speed of onset
- hazard agent location
- demography

Resources may include:

- human-operations personnel
- volunteers
- support personnel
- local
- state/territory and federal governments
- physical-equipment
- machinery
- vehicles
- technology devices
- communication devices
- aviation and marine vessels

Information management system may include:

- data receipt
- recording
- storage and dispatch modes
- procedures and protocols
- types of technology – electronic data exchange devices
- audio and visual recording mechanisms
- public/media information dissemination
- security and authorisation assignment
- recording and documenting of incident

Personnel support activities may include supply of:

- catering
- sanitation
- shelter
- rest/relief counselling services
- stress management services

Command facility establishment procedures and principles may include consideration of:

- proximity to emergency/incident
- size and type of structure
- special incident requirements
- communication modes

- logistical operations
 - site access and exit requirements
 - security requirements
 - equipment characteristics
 - support services
 - amenities
 - parking
 - topography
 - environment
 - climatic conditions
 - logistical operations
- Communication processes and systems* may include:
- designation of appropriate modes and channels of communication
 - communication responsibilities of personnel
 - radio communications
 - inter organisation liaison
 - data transfer
 - telecommunications
 - interpersonal communications
- Internal and external personnel and authorities* may include:
- operational personnel
 - emergency organisations
 - ancillary organisations
 - higher authorities
 - public
 - media
 - clients
 - government and semi government authorities and departments
 - witnesses
 - victims
 - occupational health and safety specialists
 - emergency management specialists
 - service providers
 - other analysts and stakeholders
- Support services* may include:
- emergency agencies
 - water
 - gas and power agencies
 - welfare and counselling organisations
 - medical organisations
 - equipment suppliers
 - contractors
 - community service organisations

- Debriefing*** may include:
- land management agencies
 - transport
 - critical incident stress debriefing
 - performance evaluations
 - operational analysis
- Agreed reporting mechanisms*** will involve:
- authorisation
 - distribution and development of reports in accordance with regulatory and organisational requirements and may include:
 - media reports
 - ministerial reports
 - coronial reports
 - situation reports-within emergency for external distribution-status reports
 - performance evaluations
 - legal reports
 - final reports
 - briefing papers
- Activities*** controlled include:
- operations
 - planning
 - logistics
 - communications
- Sources of information/documents*** may include:
- emergency procedures
 - standard operating procedures
 - maps
 - field reports
 - relevant Australian or international documentation in disaster/emergency management
 - organisational and workplace operating procedures and policies
 - client requirements
 - communications technology equipment
 - oral
 - aural or signed communications
 - personal and work area work procedures and practices
 - evacuation procedures
 - occupational health and safety procedures
 - applicable state, territory, commonwealth legislation and regulations which relate to:
 - public safety
 - state of emergency

- occupational health and safety regulations and legislation
- Workplace Relations Act(s)
- workers compensation
- privacy and confidentiality legislation
- freedom of information
- environment protection legislation
- equal opportunity
- equal employment opportunity and affirmative action legislation
- standards and certification requirements
- quality assurance procedures
- memorandum of understanding/agreement
- conventions
- protocols
- policies
- codes of practice

Unit Sector(s)

Not applicable.

PUATEA001B Work in a team

Modification History

Release	TP version	Comments
2	PUA12 V1	Layout adjusted. Application revised.
1	PUA00 V8.1	First release in TGA.

Unit Descriptor

This unit covers competency in working with others and making a positive contribution to the effectiveness and efficiency of a team in a work environment when predominantly under direct supervision. Limited responsibility towards others is required.

Application of the Unit

This unit applies to all workers working in the Public Safety industry, but is particularly relevant to new workers in assisting integration with the organisational team culture of the agency.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit

Performance Criteria describe the required performance needed to demonstrate achievement of the element.

of Competency.

Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Contribute to team activities	1.1 Roles and responsibilities of team members are recognised.
	1.2 Contribution is made to identifying team goals and objectives.
	1.3 <i>Activities</i> are completed to required standard within timeframe and in accordance with <i>organisation's policies and procedures</i> .
	1.4 <i>Assistance</i> in the completion of tasks is requested from other team members where appropriate.
	1.5 Team members are assisted to ensure efficient and safe completion of tasks in accordance with organisation's policies and procedures.
	1.6 Participation by team members is encouraged and acknowledged.
	1.7 Changes in allocated role and responsibilities are implemented.
	1.8 Team meetings are attended regularly and punctually.
2. Share knowledge and information	2.1 Information relevant to work is communicated effectively with team members to enable efficient completion of tasks in accordance with the organisation's policies and procedures.
	2.2 Knowledge and skills are shared between team members.
3. Give and receive support to/from team members	3.1 <i>Feedback</i> /assistance is given to other team members in an appropriate manner.
	3.2 Team members are supported in achieving workplace goals.
	3.3 Feedback from other team members is acted upon appropriately.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- encouraging others/team members
- following instructions
- interpersonal skills
- listening and using a variety of communication skills
- providing suggestions and information
- reporting information

Required Knowledge

- composition of workplace teams and roles and responsibilities of team members
- non operational and operational communication processes
- techniques for giving and receiving feedback in a constructive manner
- techniques for supporting others

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence be demonstrated in the effective communication and contribution to the achievement of tasks consistent with agreed goals.

Consistency in performance

Evidence will need to be gathered over time in a variety of team situations including regular work group and occasional or one-off work group.

Context of and specific resources for assessment

Context of assessment

On the job or in a simulated workplace environment.

Specific resources for assessment

No special requirements.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Teams*** comprise
- two or more people working towards a shared purpose
- Appropriate situation to request assistance*** may include:
- difficulty meeting timelines
 - to comply with occupational health and safety requirements
 - unsure of best method to complete task
 - to maximise efficiency
- Assisting other team members*** may include:
- own tasks completed
 - to comply with occupational health and safety requirements
 - assistance requested
 - actions of others do not comply with requirements
 - other team member appears to be having difficulty completing task
- Contribute to workplace goals*** may include:
- completion of task
 - achievement of new competencies
 - development of new skills
 - attainment of new knowledge
 - personal development
- Activities*** may include:
- working with other members of a team in a work environment or responding in a combat or support role to natural emergencies technological/industrial emergencies
 - civil/political emergencies and non emergency operations including community events
 - public relations – activities
 - sporting events
 - parades
 - festivals
- Conditions*** under which this competency may be required include
- hazardous conditions eg adverse weather
 - after dark operations
 - difficult terrain
 - time pressure
 - varying time frames from immediate/short term to long term response operations
 - varying access to equipment/resources necessitating the use of improvised techniques
 - single or multi organisation responses
 - dealing with human behaviours that result from emergency situations
 - non-emergency operations and events eg training and community education
- Appropriate feedback on***
- acknowledging initiative

performance may include:

- aptitude
- ideas
- performance and assistance
- providing constructive criticism

Organisation's policy and procedures may vary between sectors and organisations and may include:

- legislation relevant to the operation/incident/response
- legislation relevant to the organisation
- operational
- corporate and strategic plans
- operational procedures
- operational performance standards
- organisation's personnel practices
- policy and procedures
- organisation's quality standards
- organisation's approach to environmental management and sustainability

Communication processes may include:

- established organisation's procedures for recording and reporting
- the use of logs
- notebooks
- pagers
- radios and telephones
- team members may be geographically dispersed and require communication systems and technology to remain in contact

Unit Sector(s)

Not applicable.

PUATEA002B Work autonomously

Modification History

Release	TP version	Comments
3	PUA12 V2.1	Editorial changes.
2	PUA12 V1	Layout adjusted. Application revised.
1	PUA00 V8.1	First release in TGA.

Unit Descriptor

This unit covers competency for working as a member of a team or as an individual for periods of time without direct supervision and for mentoring and coaching either in an operational or non-operational environment.

Application of the Unit

This unit applies to all workers working in the Public Safety Industry, but is particularly relevant for new workers to understand the organisation's expectations and limits in regards decision making.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUATEA001B Work in a team (Fire sector specific)

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Undertake work activities

- 1.1 Work requirements are identified and undertaken.
- 1.2 Instructions and directions are understood and implemented.
- 1.3 Communication is maintained with team leader advising of progress of task/activity.
- 1.4 Personal safety and safety of others is maintained.
- 1.5 Any legal requirements and/or ramifications of ***activities*** are communicated to team leader.
- 1.6 ***Work area*** is determined or selected in accordance with operational or organisation's requirements.
- 1.7 Equipment is operated in accordance with the manufacturer's specifications.
- 1.8 OH&S and the organisation's policies and procedures.

2. Accept responsibilities

- 2.1 Responsibilities are accepted according to the organisation's policy and procedures.
- 2.2 Team leader is appraised of the outcome of task/activity.
- 2.3 Any activity that exceeds the scope of the defined task is referred to the supervisor.

3. Set performance requirements

- 3.1 ***Performance requirements*** are based on objectives and goals and agreed with supervisor.

4. Maintain team performance

- 4.1 Individual performance is monitored against defined performance requirements and appropriate action taken to maintain performance if required.
- 4.2 Performance of others is monitored and appropriate action is taken through coaching and mentoring to ensure team objectives and goals are met.
- 4.3 Supervisor is provided with feedback and

ELEMENT	PERFORMANCE CRITERIA
	<p>constructive advice.</p> <p>4.4 Issues which cannot be rectified or addressed are referred to the supervisor for appropriate action according to the organisation's policy.</p> <p>4.5 Supervisor is advised of any changes in priorities or tasks.</p> <p>4.6 All <i>required documentation</i> relevant to performance is completed.</p>
5. Act as a team leader as required	<p>5.1 Responsibility for the performance of the team is accepted.</p> <p>5.2 Goals are set, tasks identified and presented to team members.</p> <p>5.3 Instructions and directions are communicated to team members clearly and unambiguously.</p> <p>5.4 Team members' concerns and queries are recognised, discussed and dealt with.</p> <p>5.5 Any legal requirements and/or ramifications of team activities are communicated to team members.</p> <p>5.6 Duties, rosters and responsibilities are allocated to team members having regard to the skills and knowledge required to properly undertake the assignment or task and according to organisation's policy and procedures.</p> <p>5.7 Feedback on own performance is provided as required.</p> <p>5.8 Level of authority is recognised and adhered to.</p> <p>5.9 Operational debrief is conducted in accordance with the organisation's requirements.</p>

Required Skills and Knowledge

Required Skills

- communicating instructions and directions
- communicating performance expectations
- completing a range of documentation
- encouraging team members
- informal performance counselling
- providing feedback on performance
- representing issues to management

- team building

Required Knowledge

- defined OH&S policies and procedures
- knowledge of current principles and practices
- legal requirements and ramifications of team activities
- method of monitoring performance
- organisation's policy for referring performance issues
- organisation's policy relevant to hours of work and work allocation
- organisation's requirements for documenting team performance and activities
- procedures and methods of setting performance expectations
- required to work in a team
- team members' duties and responsibilities

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence be demonstrated in communication of performance expectations and providing feedback to team members.

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

On the job or in a simulated work environment. Where workplace observation is insufficient simulations or case studies may be used.

Specific resources for assessment

No special requirements.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Scope of allocated task may include:

- extent of activity
- content of activity
- degree of responsibility for task

- Performance requirements*** include
- goals
 - objectives
 - plans
 - standards
 - performance indicators
 - production rates
- Work area*** may be dependent upon
- activity conducted
 - road accessibility
 - logistical support
 - water availability
 - vicinity of built-up areas
 - areas of reduced visibility
 - distance to operation
 - hazards
 - vehicle parking
- Performance issues*** may include:
- occupational health and safety
 - hours of work details
 - concerns about ability to complete work
 - inadequate resources
- Appropriate personnel*** may include:
- manager
 - human resource personnel
 - team leader
 - supervisor
 - team members
- Required documentation*** may include:
- forms
 - proformas
 - incident reports
 - rosters
 - timesheets
 - written reports
 - logs
 - standard operating procedures
 - checklists
- Activities*** may include:
- non operational activities:
 - tasks
 - projects
 - preparing documentation
 - operational activities:
 - responding in a combat or support role to natural emergencies (fire/flood)
 - technological/industrial emergencies

- civil/political emergencies and non-emergency operations including community events
 - public relations activities
 - sporting events
 - parades
 - festivals
- Conditions under which operational activities*** may be may include:
- hazardous conditions including adverse weather
 - after dark operations
 - emergency operations
 - difficult terrain
 - time pressure
 - varying time frames from immediate/short term to long term response operations
 - varying access to equipment necessitating the use of improvised techniques
 - varying levels of resources
 - single or multi organisation responses

Unit Sector(s)

Not applicable.

RIIHAN308A Load and unload plant

Modification History

Not applicable.

Unit Descriptor

This unit covers loading and unloading plant in the resources and infrastructure industries. It includes planning and preparing, loading plant, and unloading plant. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:

- Civil construction
- Coal mining
- Drilling
- Extractive industries
- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent</p>
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	with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	<p>1.1. Access, interpret and apply <i>compliance documentation</i> and <i>safety requirements</i> relevant to the work activity</p> <p>1.2. Work instructions, plans, operational details are obtained, confirmed and applied to the work activity</p> <p>1.3. The loading/unloading site is made safe and isolated from general traffic flow by appropriate barriers</p>
2. Load the plant	<p>2.1. The dimensions and capacity of the <i>float or trailer</i> to safely carry the plant item is confirmed</p> <p>2.2. Tools and loading equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement</p> <p>2.3. Preparation of the <i>plant</i> for transportation are confirmed as having been completed</p> <p>2.4. Loading aids, including ramps and bridging materials, are placed and secured in accordance with the trailer or float specifications</p> <p>2.5. Loading procedure is agreed to by operator and/or guide before loading commences</p> <p>2.6. The plant item is moved onto the trailer or float and halted at the designated position</p>
3. Unload the plant	<p>3.1. Unloading procedure is agreed to by operator and/or guide agreed before unloading commences</p> <p>3.2. Unloading aids, including ramps, are placed and secured in accordance with the trailer or float specifications</p> <p>3.3. Securing devices are slackened and removed in a sequence which optimises safety</p>

	<p>3.4. The plant item is moved off the trailer or float and halted at the designated position</p> <p>3.5. Stow loading aids including ramps and bridging materials and securing devices for further use</p>
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Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following as required to load and unload plant:

- apply legislative, organisation and site requirements and procedures for loading and unloading plant
- apply operational safety requirements
- safely drive mobile plant
- access interpret and apply technical information
- calculate volume, weights
- maintain equipment records
- apply fault finding techniques
- comply with environmental requirements
- dispose of environmentally sensitive fluids and materials

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following as required to load and unload plant:

- site and equipment safety requirements
- understanding of required hand signals
- techniques and processes for preparing plant for transportation
- basic motion and restraint theory related to heavy plant on floats or trailers
- basic centre of gravity and balance theory related to heavy plant on floats or trailers
- types, operation, uses and imitations of load securing equipment
- site isolation and traffic control responsibilities and authorities
- materials safety data sheet
- levelling techniques
- JSA's/safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for loading and unloading plant • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of loading and unloading plant • working with others to undertake and complete the loading and unloading plant that meets all of the required outcomes • consistent timely completion of loading and unloading plant that safely, effectively and efficiently meets the required outcomes
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those

	<p>required on the job.</p> <ul style="list-style-type: none"> • Customisation of assessment and delivery environment should sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirements, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete the loading and unloading plant
Guidance information for assessment	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work

situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Compliance documentation may include:	<ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • graphical instructions, signage, work schedules/plans/specifications, load tables, tie-down instructions and charts and materials safety data sheet (MSDS) • safe work procedures related to the loading and unloading of plant items from floats or trailers • regulatory/legislative requirements pertaining to the loading and unloading of plant items from floats or trailers • quality requirements including those relating to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Safety requirements may include:	<ul style="list-style-type: none"> • State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • personal protective equipment prescribed under legislation, regulation and workplace policies and practices • safe operating procedures that include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, securing devices under strain, centre of gravity and balance requirements, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public

	<ul style="list-style-type: none"> • safe parking practices that include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement • emergency procedures that include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation
The float or trailer may include:	<ul style="list-style-type: none"> • of generic construction or purpose designed for a particular item or range of plant • normally have self loading aids although some may require an established drive on/off ramp
Plant may include:	<ul style="list-style-type: none"> • loaded and unloaded may be wheeled or tracked

Unit Sector(s)

Load Handling

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIMPO315A Conduct tractor operations

Modification History

Not applicable.

Unit Descriptor

This unit covers conducting tractor operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating the tractor; selecting, removing and fitting attachments; relocating the tractor; and carrying out machine operator maintenance and cleaning up.

Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

Tractors must be registered to drive and operate on public roads.

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operations	1.1. Access, interpret and apply <i>compliance documentation</i> relevant to conducting <i>tractor operations</i> 1.2. Obtain, confirm and apply <i>work instructions</i> to the allotted task 1.3. Obtain, confirm and apply <i>safety requirements</i> to the allotted task 1.4. Identify, obtain and implement signage requirements from the project traffic management plan 1.5. Select plant, tools and equipment to carry out tasks that are consistent with the requirements of the job and check them for serviceability and rectify or report any faults 1.6. Identify, confirm and apply <i>environmental</i> protection requirements from the project environmental management plan to the allotted task
2. Conduct machine pre-operational checks	2.1. Carry out pre-start, start-up, park and shutdown procedures 2.2. Check <i>tractor controls and functions</i> for serviceability and rectify or report any faults
3. Operate tractor	3.1. Identify site hazards associated with tractor operations and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques for tractor to achieve optimum output while achieving specified tolerances 3.3. Operate tractor to work instructions
4. Select, remove and fit attachments	4.1. Select <i>attachment</i> for the task 4.2. Remove and fit attachment 4.3. Test attachment to ensure correct fitting and operation 4.4. Use attachment in accordance with recommendations and design limits 4.5. Clean and store removed attachments in designated location

5. Relocate tractor	5.1. Move tractor safely between worksites, observing relevant codes and traffic management requirements 5.2. Prepare tractor for relocation
6. Carry out machine operator maintenance	6.1. <i>Safely park</i> , shutdown and prepare tractor for maintenance 6.2. Conduct inspection and fault finding 6.3. Remove and replace defective parts safely and in accordance with instructions 6.4. Carry out regular <i>programmed maintenance</i> tasks
7. Clean up	7.1. Clear work area and dispose of or recycle <i>materials</i> 7.2. Clean, check, maintain and store plant, <i>tools and equipment</i>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct tractor operations:

- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- apply tractor and attachment operating techniques
- interpret drawings and sketches
- apply machine attachments changing procedures

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct tractor operations:

- tractor types, characteristics, technical capabilities and limitations
- site and equipment safety requirements
- tractor and attachment operating techniques related to essential tasks
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities

- materials characteristics
- materials safety data sheet and materials handling methods
- project quality requirements
- civil construction terminology
- methods of changing machine attachments
- safe operating techniques in all terrain
- JSAs/Safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for conducting tractor operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of tractor operations, which are to include: <ul style="list-style-type: none"> • the minimum of three of the operations listed in the Range Statement, and • the fitting and removal of at least one attachment • working with others to undertake and complete tractor operations that meet all of the required outcomes • consistent timely completion of tractor operations that safely, effectively and efficiently meet the required outcomes
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and

	<p>sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</p> <ul style="list-style-type: none"> • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistently achieving the required outcomes • the conducting of a minimum of three of the tasks listed in the Range Statement

	<ul style="list-style-type: none"> • fitting and removal of at least one attachment • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete the tractor operations
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • codes of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
<p>A tractor:</p>	<ul style="list-style-type: none"> • is a self propelled, wheeled or tracked, commercial or agricultural machine • it may be a rigid or articulated, two wheel or all wheel drive • they are normally used for towing and/or providing a power take off (PTO) for specified attachments • are to include wheeled and may include tracked types
<p>Tractor operations may include:</p>	<ul style="list-style-type: none"> • post hole digging, spraying of herbicides/fertilisers, mowing/slashing, lifting, sweeping and blade based functions
<p>Work instructions may include:</p>	<ul style="list-style-type: none"> • plans, specifications, quality requirements and operational details

	<ul style="list-style-type: none"> quality requirements may include: dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<p>Safety requirements may be from the site safety plan and organisational policies and procedures and include:</p>	<ul style="list-style-type: none"> protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances safe operating procedures to recognise hazards and prevent risks associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public emergency procedures, including: emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation hazards and risks, which may include: uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials
<p>Environmental requirements are to include:</p>	<ul style="list-style-type: none"> organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
<p>Tractor controls and functions include:</p>	<ul style="list-style-type: none"> implements or other attachments, brakes and manoeuvrability
<p>Attachments may include:</p>	<ul style="list-style-type: none"> a front blade, forklift, slasher, mower, auger, drag broom, power broom, loading platform, rotary hoe, concrete mixer, spraying equipment and disc plough
<p>Safe parking practices is to include:</p>	<ul style="list-style-type: none"> ensuring access ways are clear, equipment/machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement
<p>Programmed maintenance is to include:</p>	<ul style="list-style-type: none"> cleaning, authorised servicing and the monitoring, recording and reporting of faults

Programmed maintenance may include:	<ul style="list-style-type: none"> authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities
Materials may include:	<ul style="list-style-type: none"> clays, silts, stone, gravel, mud, rock, sand, topsoil, timber, blended materials, organic materials, light scrub, grasses and bituminous mixes
Tools and equipment are to include:	<ul style="list-style-type: none"> hand tools and maintenance equipment relevant to the particular tractor

Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIMPO317A Conduct roller operations

Modification History

Not applicable.

Unit Descriptor

This unit covers the conducting roller operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; selecting, removing and fitting attachments; operating and relocating the machine; and carrying out operator maintenance and clean up.

Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply <i>compliance documentation</i> relevant to <i>roller operations</i> in the civil construction industry 1.2. Obtain, confirm and apply <i>work instructions</i> to the allotted task 1.3. Obtain, confirm and apply <i>safety requirements</i> to the allotted task 1.4. Identify, obtain and implement signage requirements from the project traffic management plan 1.5. Select plant, tools and equipment to carry out tasks that are consistent with the requirements of the job, and check them for serviceability and rectify or report any faults 1.6. Identify, confirm and apply <i>environmental protection requirements</i> to the allotted task
2. Conduct machine pre-operational checks	2.1. Carry out Pre-start, start-up, park and shutdown procedures 2.2. Check, rectify or report <i>roller controls and functions</i> for serviceability and any faults
3. Operate roller	3.1. Identify site hazards and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques to achieve optimum output while achieving specified tolerances 3.3. Operate roller to work instructions in accordance with procedures
4. Select, remove and fit attachments	4.1. Select <i>attachment</i> for the task 4.2. Remove and fit attachment 4.3. Test attachment to ensure correct fitting and operation 4.4. Use attachment in accordance with recommendations and design limits 4.5. Clean and store removed attachments in designated location
5. Relocate the roller	5.1. Move the roller safely between worksites, observing relevant codes and traffic management requirements

	5.2.Prepare the roller for relocation
6. Carry out machine operator maintenance	6.1. Safely park , shutdown and prepare the roller for maintenance 6.2.Conduct inspection and fault finding 6.3.Remove and replace defective parts safely and effectively 6.4.Carry out regular programmed maintenance tasks
7. Clean up	7.1.Clear work area and dispose of or recycle materials 7.2.Clean, check, maintain and store plant, tools and equipment

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct roller operations:

- apply legislative, organisation and site requirements and procedures
- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- apply attachment and roller operating techniques
- interpret drawings and sketches

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct roller operations:

- roller types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- basic principles of soil compaction
- site and equipment safety requirements
- rolling/compacting techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities

- materials safety data sheet and materials handling methods
- project quality requirements
- civil construction terminology
- methods of changing machine attachments
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage
- levelling techniques
- JSA's/Safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:

- knowledge of the requirements, procedures and instructions for conducting roller operations in the civil construction industry
- implementation of requirements, procedures and techniques for the safe, effective and efficient completion of roller operations in the civil construction industry, which are to include:
 - operations performed in a minimum of three different soil types and include the mandatory tasks of:
 - compacting materials to pattern and density
 - sealing and finishing
 - the removal and fitting of at least one attachment
- working with others to undertake and complete roller operations in the civil construction industry that meet all of the required outcomes

	<ul style="list-style-type: none"> • consistent timely completion of roller operations in the civil construction industry that safely, effectively and efficiently meet the required outcomes
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand

	<p>testimonial evidence of the candidate's:</p> <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes, which are to include operations performed in a minimum of three different soil types and include the mandatory tasks of: <ul style="list-style-type: none"> • compacting materials to pattern and density • sealing and finishing • the removal and fitting of at least one attachment • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete roller operations in the civil construction industry
<p>Guidance information for assessment</p>	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • codes of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
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<p>A roller:</p>	<ul style="list-style-type: none"> • is a self propelled or towed machine used for the primary purpose of compacting a variety of types of construction materials • it may be rubber tyred, smooth drum, padded drum or grid/open face type and achieves compaction by one or a combination of the following compactive methods: static weight, kneading, vibration and impact • a grid roller is utilised to breakdown oversized construction materials • padded drums may include sheepsfoot, padfoot, tamping foot or wedge foot
<p>Types of rollers may include:</p>	<ul style="list-style-type: none"> • self propelled pneumatic tyred; self propelled smooth drum vibratory roller; self propelled padded drum vibratory roller; self propelled smooth drum roller (including 3 pointers); self propelled double drum vibratory roller; towed pneumatic multi-tyred roller; towed grid roller; towed smooth drum vibratory roller; towed padded drum vibratory roller.
<p>Roller operations are to include:</p>	<ul style="list-style-type: none"> • compacting materials to pattern and density, sealing and finishing • earthworks, pavement, bitumen and asphalt works
<p>Work instructions may include:</p>	<ul style="list-style-type: none"> • plans, specifications, quality requirements and operational details • quality requirements may include: dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<p>Safety requirements may be from the site safety plan and organisational policies and procedures and include:</p>	<ul style="list-style-type: none"> • protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • safe operating procedures to recognise hazards and prevent risks associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public • emergency procedures, including: emergency shutdown and stopping, extinguishing fires,

	<p>organisational First Aid requirements and evacuation</p> <ul style="list-style-type: none"> hazards and risks, which may include: uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials
<p>Environmental protection requirements are obtained from project environmental management plan and may include:</p>	<ul style="list-style-type: none"> organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
<p>Attachments are to include:</p>	<ul style="list-style-type: none"> scraper bars and may include interchangeable drums, spray bars, wheel/drum brooms, drag brooms, padded drum attachments and blades
<p>Roller controls and functions include:</p>	<ul style="list-style-type: none"> implements or other attachments, brakes and manoeuvrability
<p>Safe parking practices is to include:</p>	<ul style="list-style-type: none"> ensuring access ways are clear, equipment/machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement
<p>Programmed maintenance is to include:</p>	<ul style="list-style-type: none"> cleaning, authorised servicing and the monitoring, recording and reporting of faults
<p>Programmed maintenance may include:</p>	<ul style="list-style-type: none"> authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities
<p>Materials may include:</p>	<ul style="list-style-type: none"> materials may include but are not limited to clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials and bituminous mixes rock types may include metamorphic, igneous and sedimentary
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> hand tools and maintenance equipment relevant to the particular roller

Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIMPO318B Conduct civil construction skid steer loader operations

Modification History

Not applicable.

Unit Descriptor

This unit covers conducting skid steer loader operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating skid steer loaders; lifting, carrying and placing materials; selecting, removing and fitting attachments; relocating the skid steer loaders; carrying out machine operator maintenance; and cleaning up.

Application of the Unit

This unit is appropriate for those working in operational roles, at worksites within:

- Civil construction

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply compliance documentation relevant to skid steer loader tasks 1.2. Obtain, confirm and apply work instructions to the allotted task 1.3. Obtain, confirm and apply safety requirements to the allotted task 1.4. Obtain, identify and implement signage requirements from the project traffic management plan 1.5. Select plant, tools and equipment to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults 1.6. Identify, confirm and apply environmental protection requirements from the project environmental management plan, to the allotted task
2. Conduct machine pre-operational checks	2.1. Carry out pre-start, start-up, park and shutdown procedures 2.2. Check loader controls and functions, including implements or other attachments, brakes and manoeuvrability for serviceability and rectify or report any faults
3. Operate skid steer loader	3.1. Identify site hazards associated with skid steer loader operations and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques for skid steer loader to achieve optimum output in accordance with manufacturer's design specifications while achieving specified tolerances 3.3. Operate loader to work instructions
4. Lift, carry and place materials	4.1. Conduct communication practices associated with transportation and lifting of materials in accordance with site specific practices and procedures, and confirm between parties 4.2. Select, attach and apply slings and lifting

	<p>gear in accordance with safe working load requirements as identified in legislation</p> <p>4.3.Establish weight of load</p> <p>4.4.Position machinery to ensure stability and locate to effectively shift materials according to job specifications</p> <p>4.5.Shift load safely and effectively</p> <p>4.6.Move load in accordance with conventional hand and available signals</p>
5. Select, remove and fit attachments	<p>5.1.Select <i>attachment</i> for the task</p> <p>5.2.Remove and fit attachment</p> <p>5.3.Test attachment to ensure correct fitting and operation as specified</p> <p>5.4.Use attachment in accordance with recommendations and design limits</p> <p>5.5.Clean and store removed attachments in designated location</p>
6. Relocate the skid steer loader	<p>6.1.Move skid steer loader safely between worksites, observing relevant codes and traffic management requirements</p> <p>6.2.Prepare for relocation of skid steer loader</p>
7. Carry out machine operator maintenance	<p>7.1.Safely park, shutdown and prepare machine for <i>maintenance</i></p> <p>7.2.Conduct inspection and fault finding</p> <p>7.3.Remove and replace defective parts safely and effectively</p> <p>7.4.Carry out regular programmed maintenance tasks</p>
8. Clean up	<p>8.1.Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>8.2.Clean, check, maintain and store plant tools and equipment</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.
Required skills
Specific skills are required to achieve the performance criteria in this unit, particularly

for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct civil construction skid steer loader operations:

- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- perform safe working load calculations
- apply skid steer loader operating techniques
- apply processes for interpreting drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- apply basic earthworks calculations
- apply levelling techniques

Required knowledge

Specific knowledge is required to achieve the performance criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following as required to conduct civil construction skid steer loader operations:

- skid steer loader types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- site and equipment safety requirements
- techniques for calculating safe working loads
- skid steer loader techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheet and materials handling methods
- Project Quality Requirements
- civil construction terminology
- methods of changing machine attachments
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage
- levelling techniques
- JSAs/Safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for conducting civil construction skid steer loader operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of civil construction skid steer loader operations, including: <ul style="list-style-type: none"> • in a minimum of two different soil types, and • to include the mandatory tasks of stripping/spreading topsoil and materials, lifting, loading vehicles, excavations, mixing materials and site clean-up • working with others to undertake and complete civil construction skid steer loader operations that meet all of the required outcomes • consistent timely completion of civil construction skid steer loader operations that safely, effectively and efficiently meet the required outcomes
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not disadvantage the participant. For example,

	<p>language, literacy and numeracy demands of assessment should not be greater than those required on the job.</p> <ul style="list-style-type: none"> • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes including: <ul style="list-style-type: none"> • in a minimum of two different soil types, and • to include the mandatory tasks of stripping/ spreading topsoil and materials, lifting, loading vehicles, excavations, mixing materials and site clean-up • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to conduct civil

	construction skid steer loader operations
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Relevant compliance documentation may include:	<ul style="list-style-type: none"> legislative, organisation and site requirements and procedures manufacturer's guidelines and specifications Australian standards codes of practice Employment and Workplace Relations legislation Equal Employment Opportunity and Disability Discrimination legislation
A skid steer loader is:	<ul style="list-style-type: none"> a self-propelled wheeled machine in which steering is accomplished by skidding or reversing the wheels or tracks on one side of the machine. It has an integral front-mounted bucket-supporting structure and linkage, which loads or excavates through forward motion of the machine, and lifts, transports and discharges material
Skid steer loader may include:	<ul style="list-style-type: none"> compacting, truck excavation, lifting and carrying materials, cutting batters and benches, rock breaking and any activities associated with attachments listed
Skid steer loader tasks are to include:	<ul style="list-style-type: none"> stripping/spreading topsoil and materials, backfilling, lifting, loading vehicles, excavations, mixing materials and site clean-up
Work instructions may include:	<ul style="list-style-type: none"> plans, specifications, quality requirements and operational details quality requirements may include but not be limited to dimensions, tolerances, standards of

	work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
Safety requirements are to be:	<ul style="list-style-type: none"> in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan
Safety requirements may include:	<ul style="list-style-type: none"> protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, a safe distance from excavations, and secured from unauthorised access or movement hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation
Tools and equipment are to include:	<ul style="list-style-type: none"> hand tools and maintenance equipment relevant to the particular loader
Environmental requirements are to include:	<ul style="list-style-type: none"> organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management

Communications practices are to include:	<ul style="list-style-type: none"> • verbal instructions and fault reporting and may include two-way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task • on-site meeting processes may include notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues
Materials may include:	<ul style="list-style-type: none"> • clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes • rock types may include metamorphic, igneous and sedimentary • construction materials may include pegs, wire, cordage, safety equipment and other support equipments
Attachments may include:	<ul style="list-style-type: none"> • a front end loader (FEL), multipurpose 4:1 bucket, forklift, dozer blade, backhoe, auger, chain digger, power broom, profiler, tiller/mixer, rotary hoe, hammer, asphalt cutter/saw, concrete cutter/saw
Operator maintenance is to include:	<ul style="list-style-type: none"> • cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities

Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIMPO319A Conduct backhoe/loader operations

Modification History

Not applicable.

Unit Descriptor

This unit covers the conducting backhoe/loader operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating backhoe/ loaders; lifting, carrying and placing materials; selecting, removing and fitting attachments; relocating the backhoe/ loaders; carrying out machine operator maintenance; and cleaning up.

Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply compliance documentation relevant to conduct backhoe/loader tasks 1.2. Obtain, confirm and apply work instructions to the allotted task 1.3. Obtain, confirm and apply safety requirements to the allotted task 1.4. Identify, obtain and implement signage requirements from the project traffic management plan 1.5. Select plant, tools and equipment to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults 1.6. Identify, confirm and apply environmental protection requirements from the project environmental management plan, to the allotted task
2. Conduct machine pre-operational checks	2.1. Carry out pre-start, start-up, park and shutdown procedures 2.2. Check machine controls and functions, including implements or other attachments, brakes and manoeuvrability for serviceability and rectify or report any faults
3. Operate backhoe/ loader	3.1. Identify site hazards associated with backhoe/loader operations and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques for backhoe/loader to achieve optimum output in accordance with design specifications while achieving specified tolerances 3.3. Operate machine to work instructions
4. Lift, carry and place materials	4.1. Conduct communication practices associated with transportation and lifting of materials 4.2. Select and attach slings and lifting gear in accordance with safe working load requirements 4.3. Establish weight of load

	<p>4.4.Position and locate machinery to ensure stability to effectively shift materials according to job specifications</p> <p>4.5.Shift load safely and effectively</p> <p>4.6.Move load in accordance with conventional hand and audible signals</p>
5. Select, remove and fit attachments	<p>5.1.Select <i>attachment</i> for the task</p> <p>5.2.Remove and fit attachment</p> <p>5.3.Test attachment to ensure correct fitting and operation</p> <p>5.4.Use attachment in accordance with recommendations and design limits</p> <p>5.5.Clean and store removed attachments in designated location</p>
6. Relocate the backhoe/ loader	<p>6.1.Move backhoe/loader safely between worksites, observing relevant codes and traffic management requirements</p> <p>6.2.Prepare backhoe/loader for relocation</p>
7. Carry out machine operator maintenance	<p>7.1.Park safely, shutdown and prepare machine for <i>maintenance</i></p> <p>7.2.Conduct inspection and fault finding</p> <p>7.3.Remove, replace safely and effectively defective parts</p> <p>7.4.Carry out regular programmed maintenance tasks</p>
8. Clean up	<p>8.1.Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>8.2.Clean, check, maintain and store plant, tools and equipment</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct backhoe/loader operations:

- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- apply techniques for calculating safe working loads
- apply backhoe/loader techniques related to essential tasks
- interpret drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- interpret materials safety data sheet and materials handling methods
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- carry out basic earthworks calculations
- apply levelling techniques
- interpret JSA's/Safe work method statement

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct backhoe/loader operations:

- backhoe/loader types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- site and equipment safety requirements
- techniques for calculating safe working loads
- backhoe/loader techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheet and materials handling methods
- project quality requirements
- civil construction terminology
- methods of changing machine attachments
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage
- levelling techniques
- JSA's/Safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for conducting backhoe/loader operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of backhoe/ loader operations, including: <ul style="list-style-type: none"> • in a minimum of two different soil types and • to include the mandatory tasks: mixing materials, stripping/spreading topsoils and materials, trench excavation, backfilling, lifting and carrying materials, loading dump trucks, wagons, hoppers, chutes, and cutting/boxing • working with others to undertake and complete backhoe/ loader operations that meet all of the required outcomes • consistent timely completion of backhoe/loader operations that safely, effectively and efficiently meet the required outcomes
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not

	<p>disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</p> <ul style="list-style-type: none"> • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes, including: <ul style="list-style-type: none"> • in a minimum of two different soil types and • the mandatory tasks: mixing materials, stripping/spreading topsoils and materials, trench excavation, backfilling, lifting and carrying materials, loading dump trucks, wagons, hoppers, chutes, and cutting/boxing • consistently achieving the required outcomes

	<ul style="list-style-type: none"> • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete the backhoe/loader operations
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • codes of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
<p>A backhoe/loader is:</p>	<ul style="list-style-type: none"> • a self-propelled wheeled machine with a main structural support designed to carry both a front-mounted bucket loading mechanism and a rear-mounted backhoe
<p>Backhoe/loader tasks are to include:</p>	<ul style="list-style-type: none"> • mixing materials, stripping/spreading topsoils and materials, trench excavation, backfilling, lifting and carrying materials, loading dump trucks, wagons, hoppers, chutes and cutting/boxing
<p>Backhoe/loader tasks may include:</p>	<ul style="list-style-type: none"> • scrub clearing, ripping, compacting, cutting, batters and benches, rock breaking, demolition and any activities associated with the attachments listed
<p>A skid steer loader is:</p>	<ul style="list-style-type: none"> • a self-propelled wheeled machine in which steering is accomplished by skidding or reversing the wheels or tracks on one side of the machine. It has an integral front-mounted

	<p>bucket-supporting structure and linkage, which loads or excavates through forward motion of the machine, and lifts, transports and discharges material</p>
Skid steer loader may include:	<ul style="list-style-type: none"> • compacting, truck excavation, lifting and carrying materials, cutting batters and benches, rock breaking and any activities associated with attachments listed
Skid steer loader tasks are to include:	<ul style="list-style-type: none"> • stripping/ spreading topsoil and materials, backfilling, lifting, loading vehicles, excavations, mixing materials and site clean up
Work instructions may include:	<ul style="list-style-type: none"> • plans, specifications, quality requirements and operational details • quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
Safety requirements are to be:	<ul style="list-style-type: none"> • in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan
Safety requirements may include:	<ul style="list-style-type: none"> • protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices • safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public • safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement

	<ul style="list-style-type: none"> hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation
Tools and equipment are to include:	<ul style="list-style-type: none"> hand tools and maintenance equipment relevant to the particular loader and may include lifting equipment
Environmental requirements are to include:	<ul style="list-style-type: none"> organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
Communications practices are to include:	<ul style="list-style-type: none"> verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task on site meeting processes may include notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues
Materials may include:	<ul style="list-style-type: none"> clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes rock types may include metamorphic, igneous and sedimentary
Attachments may include:	<ul style="list-style-type: none"> extending devices, tilt bucket, buckets, compaction wheel, ripper, plate compactor, rock breaker, auger, broom, mower/slasher, forklift, 4 in 1 bucket and free/rock grab
Operator maintenance is to include:	<ul style="list-style-type: none"> cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities

Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIMPO320B Conduct civil construction excavator operations

Modification History

Not applicable.

Unit Descriptor

This unit covers the conduct excavator operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating the machine; lifting, carrying and placing materials; selecting, removing and fitting attachments; relocating the machine; carrying out machine operator maintenance; and cleaning up.

Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

Operator license issued by OHS authority may be required in some states or territories and some excavators must be registered to drive and operate on public roads.

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply compliance documentation relevant to excavator operations tasks 1.2. Obtain, confirm and apply work instructions to the allotted task 1.3. Obtain, confirm and apply safety requirements to the allotted task 1.4. Obtain, identify and implement signage requirements from the project traffic management plan 1.5. Select plant, tools and equipment to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults 1.6. Identify, confirm and apply environmental protection requirements from the project environmental management plan, to the allotted task
2. Conduct machine preoperational checks	2.1. Carry out pre-start, start-up, park and shutdown procedures 2.2. Check excavator controls and functions, including implements or other attachments, brakes and manoeuvrability for serviceability and report or rectify any faults
3. Operate excavator	3.1. Identify site hazards associated with excavator operations and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques for excavator to achieve optimum output in accordance with design specifications while achieving specified tolerances 3.3. Operate excavator to work instructions
4. Lift, carry and place materials	4.1. Conduct communication practices associated with transportation and lifting of materials 4.2. Establish weight of load

	<p>4.3. Select, attach and use slings and lifting gear in accordance with safe working load requirements</p> <p>4.4. Position machinery ensuring stability and locate to effectively shift materials according to job specifications</p> <p>4.5. Shift load safely and effectively</p> <p>4.6. Move load in accordance with conventional hand and audible signals</p>
5. Select, remove and fit attachments	<p>5.1. Select <i>attachment</i> for the task</p> <p>5.2. Remove and fit attachment according to manufacturers manual and site requirements</p> <p>5.3. Test attachment to ensure correct fitting and operation</p> <p>5.4. Use attachment in accordance with recommendations and design limits</p> <p>5.5. Remove, clean and store attachments in designated location</p>
6. Relocate the excavator	<p>6.1. Move excavator safely between worksites, observing relevant codes and traffic management requirements</p> <p>6.2. Prepare excavator for relocation</p>
7. Carry out machine operator maintenance	<p>7.1. Safely park-up, shutdown and prepare the machine for <i>maintenance</i></p> <p>7.2. Conduct inspection and fault finding</p> <p>7.3. Remove and replace defective parts safely and effectively</p> <p>7.4. Carry out regular programmed maintenance tasks</p>
8. Clean up	<p>8.1. Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>8.2. Clean, check, maintain and store plant, tools and equipment</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct excavator operations:

- apply legislative, organisation and site requirements and procedures
- apply basic principles of soil technology for civil works
- apply site and equipment safety requirements
- apply techniques for calculating safe working loads
- apply excavator and attachment operating techniques related to essential tasks
- interpret drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- interpret materials safety data sheets and apply materials handling methods
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- carry out basic earthworks calculations
- apply levelling techniques
- apply JSA's/Safe work method statement

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct excavator operations:

- excavator types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- site and equipment safety requirements
- techniques for calculating safe working loads
- excavator and attachment operating techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheets and materials handling methods
- project quality requirements
- civil construction terminology
- methods of changing machine attachments
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage

- levelling techniques
- JSA's/Safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for conducting excavator operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of excavator operations, including: <ul style="list-style-type: none"> • in a minimum of two different soil types; and • to include the mandatory tasks of loading, bulk excavation, backfilling, trench excavation, stockpiling, battering and benching • working with others to undertake and complete excavator operations that meet all of the required outcomes • consistent timely completion of excavator operations that safely, effectively and efficiently meet the required outcomes • laser guidance or ATS are not to be used to assist in control of the machine during assessment
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and

	<p>sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</p> <ul style="list-style-type: none"> • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes, including: <ul style="list-style-type: none"> • in a minimum of two different soil types; and • to include the mandatory tasks of loading, bulk excavation, backfilling,

	<p>trench excavation, stockpiling, battering and benching</p> <ul style="list-style-type: none"> consistently achieving the required outcomes first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> working with others to undertake and complete excavator operations
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> legislative, organisation and site requirements and procedures manufacturer's guidelines and specifications Australian standards codes of practice Employment and workplace relations legislation Equal Employment Opportunity and Disability Discrimination legislation
<p>An excavator is:</p>	<ul style="list-style-type: none"> a self-propelled crawler or wheeled machine with an upper structure capable of a minimum of 360 degree rotation which excavates, elevates, swings and discharges material by the action of a bucket fitted to the boom and arm or telescoping boom, without moving the chassis or undercarriage during any part of the working cycle of the machine are to include tracked and may include wheeled excavators
<p>Excavator operations tasks are to include:</p>	<ul style="list-style-type: none"> loading, bulk excavation, backfilling, trench excavation, stockpiling, battering and benching

<p>Excavator operations tasks may include:</p>	<ul style="list-style-type: none"> • compacting materials, demolition, rock breaking, removal of trees and ripping, lifting materials, cutting/boxing, laying pipes, cut and fill, mixing materials, stripping/spreading topsoil and materials
<p>Work instructions may include:</p>	<ul style="list-style-type: none"> • plans, specifications, quality requirements and operational details • quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<p>Safety requirements are to be:</p>	<ul style="list-style-type: none"> • in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan
<p>Safety requirements may include:</p>	<ul style="list-style-type: none"> • protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices • safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public • safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement • hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials • emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping,

	extinguishing fires, organisational First Aid requirements and evacuation
Tools and equipment are to include:	<ul style="list-style-type: none"> hand tools and maintenance equipment relevant to the particular loader
Environmental requirements are to include:	<ul style="list-style-type: none"> organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
Communications practices are to include:	<ul style="list-style-type: none"> verbal instructions and fault reporting and may include 2-way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task on site meeting processes may include notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues
Materials may include:	<ul style="list-style-type: none"> clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes rock types may include metamorphic, igneous and sedimentary
Attachments may include:	<ul style="list-style-type: none"> ripper/tyne, auger, tilt bucket, rock breaker, buckets, lifting device, vibrating compaction plate and compaction wheel
Operator maintenance is to include:	<ul style="list-style-type: none"> cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities

Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIMPO321B Conduct civil construction wheeled front end loader operations

Modification History

Not applicable.

Unit Descriptor

This unit covers conducting wheeled front end loader operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating front end loaders; attaching, securing, lifting, carrying and placing materials; selecting, removing and fitting attachments; relocating the front end loader; carrying out machine operator maintenance; and cleaning up.

Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

Operator licence issued by OHS authority may be required in some states or territories and wheeled loaders must be registered to drive and operate on public roads.

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range
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	statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	<p>1.1. Access, interpret and apply <i>compliance documentation</i> relevant to <i>wheeled front end loader tasks</i></p> <p>1.2. Obtain, confirm and apply <i>work instructions</i> to the allotted task</p> <p>1.3. Obtain, confirm and apply <i>safety requirements</i> to the allotted task</p> <p>1.4. Obtain, identify and implement signage requirements from the project traffic management plan</p> <p>1.5. Select plant, <i>tools and equipment</i> to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults</p> <p>1.6. Identify, confirm and apply <i>environmental</i> protection requirements from the project environmental management plan to the allotted task</p>
2. Conduct machine pre-operational checks	<p>2.1. Carry out pre-start, start-up, park and shutdown procedures</p> <p>2.2. Check front end loader controls and functions, including implements or other attachments, brakes and manoeuvrability for serviceability, and rectify or report any faults</p>
3. Operate front end loader	<p>3.1. Identify site hazards associated with front end loader operations and use safe operating techniques to minimise risk</p> <p>3.2. Identify and apply operating techniques for front end loader to achieve optimum output in accordance with design specifications while achieving specified tolerances</p> <p>3.3. Operate front end loader to work instructions</p>

4. Attach, secure, lift, carry and place materials	<p>4.1. Conduct communication practices associated with transportation and lifting of materials</p> <p>4.2. Establish weight of load</p> <p>4.3. Select, attach and use slings and lifting gear in accordance with safe working load requirements</p> <p>4.4. Position machinery to ensure stability and locate to effectively shift materials according to job specifications</p> <p>4.5. Shift load safely and effectively</p> <p>4.6. Move load in accordance with conventional hand and audible signals</p>
5. Select, remove and fit attachments	<p>5.1. Select attachment for the task</p> <p>5.2. Remove and fit attachment</p> <p>5.3. Test attachment to ensure correct fitting and operation</p> <p>5.4. Use attachment in accordance with recommendations and design limits</p> <p>5.5. Clean and store removed attachments in designated location</p>
6. Relocate the front end loader	<p>6.1. Move front end loader safely between worksites, observing relevant codes and traffic management requirements</p> <p>6.2. Prepare front end loader for relocation</p>
7. Carry out machine operator maintenance	<p>7.1. Safely park, shutdown and prepare machine for maintenance</p> <p>7.2. Conduct inspection and fault finding</p> <p>7.3. Remove and replace defective parts safely and effectively</p> <p>7.4. Carry out regular programmed maintenance tasks</p>
8. Clean up	<p>8.1. Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>8.2. Clean, check, maintain and store plant tools and equipment</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct civil construction wheeled front end loader operations:

- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- apply techniques for calculating safe working loads
- apply front end loader and attachment operating techniques related to essential tasks
- interpret drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- interpret materials safety data sheets and apply materials handling methods
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- carry out basic earthworks calculations
- apply levelling techniques
- apply JSAs/Safe work method statement

Required knowledge

Specific knowledge is required to achieve the performance criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following as required to conduct civil construction wheeled front end loader operations:

- front end loader types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- site and equipment safety requirements
- techniques for calculating safe working loads
- front end loader and attachment operating techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheets and materials handling methods
- project quality requirements
- civil construction terminology

- methods of changing machine attachments
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage
- levelling techniques
- JSAs/Safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for conducting civil construction wheeled front end loader operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of civil construction wheeled front end loader operations, including: <ul style="list-style-type: none"> • in a minimum of two different soil types; and • to include the mandatory tasks of mixing materials, stripping/spreading topsoil and materials, loading, cutting/boxing, backfilling, lifting and carrying materials • working with others to undertake and complete civil construction wheeled front end loader operations that meet all of the required outcomes • consistent timely completion of civil construction wheeled front end loader operations that safely, effectively and efficiently meet the required outcomes
Context of and specific	<ul style="list-style-type: none"> • This unit must be assessed in the context of the

<p>resources for assessment</p>	<p>work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</p> <ul style="list-style-type: none"> • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes, including: <ul style="list-style-type: none"> • in a minimum of two different soil

	<p>types; and</p> <ul style="list-style-type: none"> to include the mandatory tasks of mixing materials, stripping/spreading topsoil and materials, loading, cutting/boxing, backfilling, lifting and carrying materials consistently achieving the required outcomes first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> working with others to undertake and complete civil construction wheeled front end loader operations
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Relevant compliance documentation may include:	<ul style="list-style-type: none"> legislative, organisation and site requirements and procedures manufacturer's guidelines and specifications Australian standards codes of practice Employment and Workplace Relations legislation Equal Employment Opportunity and Disability Discrimination legislation
A wheeled front end loader is:	<ul style="list-style-type: none"> a self-propelled wheeled machine with an integral front-mounted bucket-supporting structure and linkage with integral quick coupler it loads or excavates through forward motion of the machine, and lifts, transports and discharges material

<p>Front end loader tasks are to include:</p>	<ul style="list-style-type: none"> • mixing materials, stripping/spreading topsoil and materials, loading, cutting/boxing, backfilling, lifting and carrying materials
<p>Work instructions may include:</p>	<ul style="list-style-type: none"> • plans, specifications, quality requirements and operational details • quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<p>Safety requirements are to be:</p>	<ul style="list-style-type: none"> • in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan
<p>Safety requirements may include:</p>	<ul style="list-style-type: none"> • protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices • safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public • safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement • hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials • emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation

Tools and equipment are to include:	<ul style="list-style-type: none"> hand tools and maintenance equipment relevant to the particular loader
Environmental requirements are to include:	<ul style="list-style-type: none"> organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
Communications practices are to include:	<ul style="list-style-type: none"> verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task on site meeting processes may include notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues
Materials may include:	<ul style="list-style-type: none"> clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes rock types may include metamorphic, igneous and sedimentary
Attachments are to include:	<ul style="list-style-type: none"> a bucket (general purpose or multipurpose)
Attachments may include:	<ul style="list-style-type: none"> rippers/scarifiers and/or other attachments approved by the manufacturer
Operator maintenance is to include:	<ul style="list-style-type: none"> cleaning, authorised servicing and the monitoring, recording and reporting of faults <p>It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities</p>

Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIMPO322A Conduct civil construction tracked front end loader operations

Modification History

Not applicable.

Unit Descriptor

This unit covers conducting tracked front end loader operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating the machine; lifting, carrying and placing materials; relocating the machine; carrying out machine operator maintenance; and cleaning up.

Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

Operator license issued by OHS authority may be required in some states or territories and tracked loaders must be registered to drive and operate on public roads.

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent</p>
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	with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	<p>1.1. Access, interpret and apply <i>compliance documentation</i> relevant to <i>tracked front end loader tasks</i></p> <p>1.2. Obtain, confirm and apply <i>work instructions</i> to the allotted task</p> <p>1.3. Obtain, confirm and apply <i>safety requirements</i> to the allotted task</p> <p>1.4. Identify, obtain and implement signage requirements from the project traffic management plan</p> <p>1.5. Select plant, <i>tools and equipment</i> to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults</p> <p>1.6. Identify, confirm and apply <i>environmental</i> protection requirements from the project environmental management plan, to the allotted task</p>
2. Conduct machine pre-operational checks	<p>2.1. Carry out <i>pre-start, start-up, park and shutdown procedures</i></p> <p>2.2. Check front end loader controls and functions, including implements or other <i>attachments</i>, brakes and manoeuvrability for serviceability and rectify or report any faults</p>
3. Operate front end loader	<p>3.1. Identify site hazards associated with front end loader operations and safe operating techniques are used to minimise risk</p> <p>3.2. Identify and apply operating techniques for front end loader to achieve optimum output in accordance with design specifications while achieving specified tolerances</p> <p>3.3. Operate front end loader to work instructions</p>
4. Attach, secure, lift, carry and	4.1. Conduct <i>communication</i> practices

place	<p>associated with transportation and lifting of materials</p> <p>4.2.Establish weight of load</p> <p>4.3.Select , attach and use slings and lifting gear in accordance with safe working load requirements</p> <p>4.4.Position machinery to ensure stability and locate to effectively shift materials according to job specifications</p> <p>4.5.Shift load safely and effectively</p> <p>4.6.Move load in accordance with conventional hand and audible signals</p>
5. Relocate the front end loader	<p>5.1.Move front end loader safely between work sites, observing relevant codes and traffic management requirements</p> <p>5.2.Prepare front end loader for relocation</p>
6. Carry out machine operator maintenance	<p>6.1.Safely park front, shutdown and prepared machine for <i>maintenance</i></p> <p>6.2.Conduct inspection and fault finding</p> <p>6.3.Remove and replace defective parts safely and effectively</p> <p>6.4.Carry out regular programmed maintenance tasks</p>
7. Clean up	<p>7.1.Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>7.2.Clean, check, maintain and store plant, tools and equipment</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct tracked front end loader operations:

- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements

- apply techniques for calculating safe working loads
- apply front end loader and attachment operating techniques related to essential tasks
- interpret drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- interpret materials safety data sheets and apply materials handling methods
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- carry out basic earthworks calculations
- apply levelling techniques
- apply JSA's/Safe work method statement requirements

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct tracked front end loader operations:

- tracked front end loader types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- site and equipment safety requirements
- techniques for calculating safe working loads
- front end loader and attachment operating techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheets and materials handling methods
- project quality requirements
- civil construction terminology
- methods of changing machine attachments
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage
- levelling techniques
- JSA's/Safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction

with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for conducting tracked front end loader operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of tracked front end loader operations, including: <ul style="list-style-type: none"> • in a minimum of two different soil types; and • are to include the mandatory tasks of mixing materials, stripping/spreading topsoil and materials, loading, cutting/boxing, backfilling, lifting and carrying materials • working with others to undertake and complete tracked front end loader operations that meet all of the required outcomes • consistent timely completion of tracked front end loader operations that safely, effectively and efficiently meet the required outcomes
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

	<ul style="list-style-type: none"> • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular work sites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes, including: <ul style="list-style-type: none"> • in a minimum of two different soil types; and • are to include the mandatory tasks of mixing materials, stripping/spreading topsoil and materials, loading, cutting/boxing, backfilling, lifting and carrying materials • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete the tracked front end loader operations

Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.
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Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> legislative, organisation and site requirements and procedures manufacturer's guidelines and specifications Australian standards codes of practice Employment and workplace relations legislation Equal Employment Opportunity and Disability Discrimination legislation
<p>A tracked front end loader is:</p>	<ul style="list-style-type: none"> a self-propelled tracked machine with an integral front-mounted bucket-supporting structure and linkage, which loads or excavates through forward motion of the machine, and lifts, transports and discharges material
<p>Tracked front end loader tasks are to include:</p>	<ul style="list-style-type: none"> mixing materials, stripping/spreading topsoil and materials, loading, cutting/boxing, backfilling, lifting and carrying materials
<p>Tracked front end loader tasks may include:</p>	<ul style="list-style-type: none"> scrub clearing and ripping
<p>Work instructions may include:</p>	<ul style="list-style-type: none"> plans, specifications, quality requirements and operational details quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<p>Safety requirements are to be:</p>	<ul style="list-style-type: none"> in accordance with state or territory legislation and regulations, organisational safety policies

	and procedures, and project safety plan
Safety requirements may include:	<ul style="list-style-type: none"> • protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices • safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public • safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement • hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials • emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation
Tools and equipment are to include:	<ul style="list-style-type: none"> • hand tools, lifting and maintenance equipment relevant to the particular tracked loader
Environmental requirements are to include:	<ul style="list-style-type: none"> • organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
Attachments are to include:	<ul style="list-style-type: none"> • a bucket (general purpose or multipurpose) rippers/scarifiers and claw
Communications practices are to include:	<ul style="list-style-type: none"> • verbal instructions and fault reporting and may include 2-way radio, hand signals, mobile phone, site specific instructions, written

	<p>instructions or instructions related to job/task</p> <ul style="list-style-type: none"> on site meeting processes may include notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues
Materials may include:	<ul style="list-style-type: none"> clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes rock types may include metamorphic, igneous and sedimentary
Operator maintenance is to include:	<ul style="list-style-type: none"> cleaning, authorised servicing and the monitoring, recording and reporting of faults <p>It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities</p>

Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIMPO323A Conduct civil construction dozer operations

Modification History

Not applicable.

Unit Descriptor

This unit covers conducting dozer operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating the machine; selecting, removing and fitting attachments; relocating the machine; carrying out machine operator maintenance; and cleaning up.

Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply compliance documentation relevant to dozer operations tasks 1.2. Obtain, confirm and apply work instructions to the allotted task 1.3. Obtain, confirm and apply safety requirements to the allotted task 1.4. Identify, obtain and implement signage requirements from the project traffic management plan 1.5. Select plant, tools and equipment to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults 1.6. Identify, confirm and apply environmental protection requirements from the project environmental management plan to the allotted task
2. Conduct machine pre-operational checks	2.1. Carry out pre-start, start-up, park and shutdown procedures 2.2. Check dozer controls for serviceability and functions, including implements or other attachments, brakes and manoeuvrability and rectify or report any faults
3. Operate dozer	3.1. Identify site hazards associated with dozer operations and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques for dozer to achieve optimum output in accordance with design specifications while achieving specified tolerances 3.3. Operate dozer to work instructions
4. Select, remove and fit attachments	4.1. Select attachment for the task 4.2. Remove and fit attachment 4.3. Test attachment to ensure correct fitting and operation 4.4. Use attachment in accordance with recommendations and design limits 4.5. Remove, clean and store attachments in

	designated location
5. Relocate the dozer	5.1. Move dozer safely between worksites, observing relevant codes and traffic management requirements 5.2. Prepare dozer for relocation
6. Carry out machine operator maintenance	6.1. Safely park, shutdown and prepare machine for <i>maintenance</i> 6.2. Conduct inspection and fault finding 6.3. Remove and replace defective parts safely and effectively 6.4. Carry out regular programmed maintenance tasks
7. Clean up	7.1. Clear work area and dispose of or recycle materials in accordance with project environmental management plan 7.2. Clean, check, maintain and store plant, tools and equipment

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct dozer operations:

- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- apply techniques for calculating safe working loads
- apply dozer and attachment operating techniques related to essential tasks
- interpret drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- interpret materials safety data sheets and apply materials handling methods
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- carry out basic earthworks calculations
- apply levelling techniques

- apply JSA's/Safe work method statement requirements

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct dozer operations:

- dozer types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- site and equipment safety requirements
- techniques for calculating safe working loads
- dozer and attachment operating techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheets and materials handling methods
- project quality requirements
- civil construction terminology
- methods of changing machine attachments
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage
- levelling techniques
- JSA's/Safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:

- knowledge of the requirements, procedures and instructions for conduct dozer operations
- implementation of requirements, procedures and techniques for the safe, effective and

	<p>efficient completion of conduct dozer operations, including:</p> <ul style="list-style-type: none"> • in a minimum of two different soil types, and • to include the mandatory tasks of stripping/spreading topsoil and materials, cut and fill, battering, stockpiling, bulk excavation, cutting drains, benching and backfilling • working with others to undertake and complete the conduct dozer operations that meet all of the required outcomes • consistent timely completion of conduct dozer operations that safely, effectively and efficiently meet the required outcomes • laser guidance or ATS are not to be used to assist in control of the machine during assessment
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with

	<p>disabilities.</p> <ul style="list-style-type: none"> • Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes, including: <ul style="list-style-type: none"> • in a minimum of two different soil types, and • to include the mandatory tasks of stripping/spreading topsoil and materials, cut and fill, battering, stockpiling, bulk excavation, cutting drains, benching and backfilling • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete dozer operations
Guidance information for assessment	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

regional contexts) may also be included.	
<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> legislative, organisation and site requirements and procedures manufacturer's guidelines and specifications Australian standards codes of practice Employment and workplace relations legislation Equal Employment Opportunity and Disability Discrimination legislation
<p>A dozer:</p>	<ul style="list-style-type: none"> is a self-propelled tracked or wheeled purpose designed machine with a blade mounted at the front end are to include tracked and may include wheeled
<p>Dozer tasks are to include:</p>	<ul style="list-style-type: none"> stripping/spreading topsoil and materials, cut and fill, battering, stockpiling, bulk excavation, cutting drains, benching and backfilling
<p>Dozer tasks may include:</p>	<ul style="list-style-type: none"> land clearing, track rolling, ripping, push loading, scrapers, towing equipment, working in tandem, winching, boxing, mixing materials and constructing fire breaks
<p>Work instructions may include:</p>	<ul style="list-style-type: none"> plans, specifications, quality requirements and operational details quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<p>Safety requirements are to be:</p>	<ul style="list-style-type: none"> in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan
<p>Safety requirements may include:</p>	<ul style="list-style-type: none"> protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with

	<p>underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public</p> <ul style="list-style-type: none"> • safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement • hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials • emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation
Tools and equipment are to include:	<ul style="list-style-type: none"> • hand tools and maintenance equipment relevant to the particular dozer
Environmental requirements are to include:	<ul style="list-style-type: none"> • organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
Materials may include:	<ul style="list-style-type: none"> • clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes • rock types may include metamorphic, igneous and sedimentary
Attachments may include:	<ul style="list-style-type: none"> • but not be limited to stick rakes, root rakes, push blade, angle blade, bull blade, power angle tilt blade, rippers, winch, tree pusher, cable plough, stump plough, power control unit and cable drum
Operator maintenance is to include:	<ul style="list-style-type: none"> • cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities

Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIMPO324A Conduct civil construction grader operations

Modification History

Not applicable.

Unit Descriptor

This unit covers conducting grader operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating the machine; selecting, removing and fitting attachments; relocating the machine; carrying out machine operator maintenance; and cleaning up.

Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

Operator license issued by OHS authority may be required in some states or territories and graders must be registered to drive and operate on public roads.

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply compliance documentation relevant to grader operations tasks 1.2. Obtain, confirm and apply work instructions to the allotted task 1.3. Obtain, confirm and apply safety requirements to the allotted task 1.4. Resolve coordination requirements with others at the site prior to commencing and during work activities 1.5. Identify, obtain and implement signage requirements from the project traffic management plan 1.6. Select plant, tools and equipment to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults 1.7. Identify, confirm and apply environmental protection requirements from the project environmental management plan, to the allotted task
2. Conduct machine pre-operational checks	2.1. Carry out pre-start, start-up, park and shutdown procedures 2.2. Recognise and respond to hazardous and emergency situations as required 2.3. Check grader controls and functions, including implements or other attachments, brakes and manoeuvrability for serviceability and rectify or report any faults
3. Operate grader	3.1. Identify site hazards associated with grader operations and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques for grader to achieve optimum output in accordance with design specifications while achieving specified tolerances

	3.3. Operate grader to work instructions
4. Select, remove and fit attachments	<p>4.1. Select <i>attachment</i> for the task</p> <p>4.2. Remove and fit attachment</p> <p>4.3. Test attachment to ensure correct fitting and operation</p> <p>4.4. Use attachment in accordance with recommendations and design limits</p> <p>4.5. Clean and store removed attachments in designated location</p>
5. Relocate the grader	<p>5.1. Move grader safely between worksites, observing relevant codes and traffic management requirements</p> <p>5.2. Prepare grader for relocation</p>
6. Carry out machine operator maintenance	<p>6.1. Safely park, shutdown and prepare machine for <i>maintenance</i></p> <p>6.2. Conduct inspection and fault finding</p> <p>6.3. Remove and replace defective parts safely and effectively</p> <p>6.4. Carry out regular programmed maintenance and housekeeping tasks</p> <p>6.5. Maintain and process records</p>
7. Clean up	<p>7.1. Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>7.2. Clean, check, maintain and store plant, tools and equipment</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct grader operations:

- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- apply grader operating techniques related to essential tasks, including:
 - apply cut and fill techniques

- apply levelling techniques
- construct drains
- form and carry a windrow
- tow equipment/plant
- apply processes for interpreting drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- interpret materials safety data sheets and apply materials handling methods
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- carry out basic earthworks calculations
- apply JSA's/Safe work method statement procedures
- apply diagnostic techniques
- apply operations directing techniques
- apply driving techniques
- apply hazardous goods handling techniques
- interpret plans, reports, maps, specifications
- apply lifting techniques
- organise work tasks
- apply defect reporting requirements
- apply safe work practices
- use communications equipment
- use computer systems
- use hand and power tools

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct grader operations:

- site risk control procedures
- site and equipment health and safety procedures, including:
 - site isolation and traffic control responsibilities and authorities
 - materials safety data sheets (MSDS) and materials handling methods
 - JSA's/Safe work method statement
 - hazard identification and response procedures
 - site and project personal protective equipment requirements
- site and project environmental requirements and constraints
- site and project quality requirements
- site and project communication procedures

- site operational procedures
- civil construction activity sequences of road construction, earthworks and drainage
- civil construction terminology
- processes for interpreting drawings and sketches
- site soil and survey data
- basic principles of soil technology for civil works
- grader types, characteristics, technical capability and limitations
- grader pre-start, start-up, operating and shut-down procedures and techniques
- grader and attachment operating techniques related to essential tasks, including:
 - safe operating techniques in all terrain
 - levelling techniques
- operational, maintenance and basic diagnostic procedures
- methods of changing machine attachments
- site record keeping requirements
- basic earthworks calculations

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for conducting grader operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of grader operations, including: <ul style="list-style-type: none"> • in a minimum of two different soil types and • to include the mandatory tasks of cutting and maintaining drains, forming/upgrading/maintaining roads, mixing/ spreading materials, scarifying and ripping, cutting and trimming of batters and trimming of road sub-grades and pavements

	<ul style="list-style-type: none"> • working with others to undertake and complete grader operations that meet all of the required outcomes • consistent timely completion of grader operations that safely, effectively and efficiently meet the required outcomes • laser guidance or ATS are not to be used to assist in control of the machine during assessment
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment</p>

	<p>methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes, including: <ul style="list-style-type: none"> • in a minimum of two different soil types, and • to include the mandatory tasks of cutting and maintaining drains, forming/upgrading/ maintaining roads, mixing/ spreading materials, scarifying and ripping, cutting and trimming of batters and trimming of road sub-grades and pavements • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete grader operations
<p>Guidance information for assessment</p>	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Relevant compliance documentation

may include:

- legislative, organisation and site requirements and procedures
- manufacturer's guidelines and specifications
- Australian standards
- codes of practice

	<ul style="list-style-type: none"> • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
A grader:	<ul style="list-style-type: none"> • is a self-propelled articulating or rigid framed wheeled machine, designed to cut, move and place construction materials using a centrally mounted blade and may include forward and/or rear mounted rippers/scarifiers • the blade and attachment controls are normally hydraulic; however, they may be mechanical
Grader tasks are to include:	<ul style="list-style-type: none"> • cutting and maintaining drains, forming/upgrading/maintaining roads, mixing/spreading materials, scarifying and ripping, cutting and trimming of batters and trimming of road sub-grades and pavements
Grader tasks may include:	<ul style="list-style-type: none"> • stripping/spreading topsoil and materials, cutting/boxing, cut and fill
Work instructions may include:	<ul style="list-style-type: none"> • plans, specifications, quality requirements and operational details • quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction • soil types and information • survey data, including: cut and fill levels, layer thicknesses, finished levels, finished grades and cross-falls
Safety requirements are to be:	<ul style="list-style-type: none"> • in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan
Safety requirements may include:	<ul style="list-style-type: none"> • the site safety plan and organisational policies and procedures • protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices • safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel,

	<p>restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public</p> <ul style="list-style-type: none"> • safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement • hazards and risks may include but not be limited to installed services, damaged or defective pressurise hoses and fastenings, abandoned equipment, adverse weather conditions (electrical storms, floods, fires), chemicals, contaminants, ancillary equipment, fences, holes and pot holes, over-hanging rocks, personnel, unsafe ground, unstable faces, vehicles, powerlines, dust and noise, conveyors, overhead services and stored energy which may include: engine components, radiators and cooling systems, hydraulic tanks and reservoirs, air tanks and reservoirs, hydraulic hoses, air hoses, tyres, air conditioning components, electrical components, braking systems, centrifugal forces • hazardous and emergency situations, which may include: motor vehicle accidents, lighting strikes (potential tyre explosion) and tyre fires (isolation procedures) • emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation
Tools and equipment are to include:	<ul style="list-style-type: none"> • hand tools and maintenance equipment relevant to the particular grader
Environmental requirements are to include:	<ul style="list-style-type: none"> • organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
pre-start, start-up, park and shutdown procedures may include:	<ul style="list-style-type: none"> • external check of the machine • inspection of attachments to ensure security and identify defects • checking of fluid levels (windscreen washer tank, hydraulic oil, coolant, grease, water,

	<p>engine oil, fuel)</p> <ul style="list-style-type: none"> • carry out lubrication • checking of display instrumentation and gauges (indicators, gauges, laser levels), computer systems, including: <ul style="list-style-type: none"> • brake air pressure • brake oil temperature • computer indicators • engine oil pressure • fuel filter • parking brake • retarder • service meter • speedometer/odometer • steering filters • tachometer • torque converter • oil temperature • transmission filter • voltmeter • water temperature • inspection of air filter restriction indicator • inspection and checking of cab (horn, lights, air conditioner) • testing of engine and stop engine lights • testing visual and audio warning devices and lights • checking instruments and control lever • reporting of defects and damage • secure equipment as required by site procedures • render attachments safe • clear access ways
Materials may include:	<ul style="list-style-type: none"> • clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes • rock types may include metamorphic, igneous and sedimentary
Attachments are to include:	<ul style="list-style-type: none"> • tynes/scarifiers
Attachments may include:	<ul style="list-style-type: none"> • dozer blade, machine guidance system, laser levelling equipment, ripper, slash

Operator maintenance is to include:	<ul style="list-style-type: none">• cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities
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Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIOHS205A Control traffic with stop-slow bat

Modification History

Not applicable.

Unit Descriptor

This unit covers controlling of traffic with a stop-slow bat in resources and infrastructure industries. It includes: planning and preparing; coordinating traffic; operating radios; and cleaning up.

Application of the Unit

This unit is appropriate for those working in a operational roles, at worksites within:

- Civil construction
- Coal mining
- Drilling
- Extractive industries
- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Plan and prepare</p>	<p>1.1. Access, interpret and apply compliance documentation relevant to controlling of traffic with a stop-slow bat</p> <p>1.2. Obtain, confirm and apply work instructions relevant to the allotted task</p> <p>1.3. Obtain, confirm and apply safety requirements from the site safety plan and organisational policies and procedures for the allotted task</p> <p>1.4. Identify, obtain and implement signage and devices requirements from the project traffic management plan</p> <p>1.5. Select tools and equipment to carry out tasks that are consistent with the requirements of the job; check them for serviceability and rectify or report any faults</p> <p>1.6. Identify, confirm and apply environmental protection requirements from the project environmental management plan</p>
<p>2. Coordinate traffic</p>	<p>2.1. Position or confirm temporary traffic signs and barriers in accordance with regulations</p> <p>2.2. Direct traffic in accordance with site traffic plan and away from services or areas of potential damage or danger</p> <p>2.3. Control vehicles and pedestrian traffic within the worksite to ensure safety of workers</p> <p>2.4. Monitor traffic, and make adjustments for changing conditions, and position waiting vehicles to allow for smooth traffic flow</p> <p>2.5. Use hand held stop/slow bats in accordance with regulatory authority approved procedures</p> <p>2.6. Use hand signals in accordance with regulatory authority approved procedures</p> <p>2.7. Report traffic offenders in accordance with regulatory authority approved procedures</p>

<p>3. Operate radio</p>	<p>3.1.Adjust <i>radio</i> controls for optimum reception/transmission results</p> <p>3.2.Transmit messages concisely and in accordance with operating procedures or best practice</p> <p>3.3.Maintain radio power supply</p> <p>3.4.Check radio contact after nominated period of non contact</p>
<p>4. Clean up</p>	<p>4.1.Remove or cover signs and devices sequentially to provide warning to motorists during shutdown</p> <p>4.2.Clean, check, maintain and store tools and equipment in accordance with recommendations and standard work practices</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to control traffic with a stop-slow bat:

- apply legislative, organisation and site requirements and procedures

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to control traffic with a stop-slow bat:

- site and equipment safety requirements
- traffic controlling
- traffic management plans
- traffic control signage and barricades
- radio operations
- equipment types, characteristics, technical capabilities and limitations
- operational and maintenance procedures for equipment
- site isolation and traffic control responsibilities and authorities

- affects of travel speed and vehicle mass on stopping distances
- quality requirements
- JSAs/Safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for controlling traffic with a stop-slow bat • implementation of requirements, procedures and techniques for the safe, effective and efficient control of traffic with a stop-slow bat • working with others to control traffic with a stop-slow bat that meets all of the required outcomes • consistent timely control of traffic with a stop-slow bat that safely, effectively and efficiently meets the required outcomes
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Evidence for assessment is best gathered using the outcomes of products and processes of the workplace context. • The assessment environment should not

	<p>disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</p> <ul style="list-style-type: none"> • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to control traffic with a stop-slow bat
<p>Guidance information for assessment</p>	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
<p>Work instructions may be received via verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, materials safety data sheets (MSDS) and diagrams or sketches and may include:</p>	<ul style="list-style-type: none"> • plans • specifications • quality requirements • operational details • safe work procedures or equivalent • regulatory/legislative requirements • manufacturers' specifications and instructions • organisation work specifications and requirements • instructions issued by authorised organisational or external personnel • relevant Australian Standards
<p>Safety requirements may include:</p>	<ul style="list-style-type: none"> • those included in compliance documentation • personal protective equipment • safe operating procedures, including recognising and preventing hazards associated with: <ul style="list-style-type: none"> • uneven/unstable terrain • trees • pits • poles • trip hazards

	<ul style="list-style-type: none"> • dirt mounds • overhead services • underground services • bridges • surrounding buildings • obstructions • structures • facilities • fires • excavations • traffic • embankments • cuttings • hazardous materials • recently filled trenches • other machines • personnel • restricted access barriers • traffic control • working in proximity to others • worksite visitors and the public • safe parking practices, including: <ul style="list-style-type: none"> • ensuring access ways are clear • equipment/machinery is away from overhangs and refuelling sites • safe distance from excavations • secured from unauthorised access or movement
<p>Signage and devices are to include:</p>	<ul style="list-style-type: none"> • temporary warning signs • regulatory and traffic cones
<p>Signage and devices may include:</p>	<ul style="list-style-type: none"> • vehicle mounted signs and flashing lights • guide signs • warning signs • barriers • hazard markers • bollards • arrow boards
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> • radio • stop-slow bat • high visibility vest

	<ul style="list-style-type: none"> • traffic cones • signage
Tools and equipment may include:	<ul style="list-style-type: none"> • warning lights and beacons • arrow boards
Environmental include the requirements of the organisational/ project environmental management plan, and may include:	<ul style="list-style-type: none"> • waste management • water quality protection • noise, vibration and dust management • clean-up management
Traffic conditions may include	<ul style="list-style-type: none"> • congested urban environments • low traffic rural areas • off-road un-trafficked areas • buildings • parking sites • pedestrian areas
Radios may include:	<ul style="list-style-type: none"> • VHF and UHF

Unit Sector(s)

Occupational Health and Safety

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

RIIVEH304B Conduct tip truck operations

Modification History

Not applicable.

Unit Descriptor

This unit covers the conduct of tip truck operations in the resources and infrastructure industries. It includes planning and preparing, conducting pre-operational checks, operating a tip truck, loading, transporting and tipping materials, carrying out driver maintenance, and cleaning up. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:

- Civil construction
- Coal mining
- Drilling
- Extractive industries
- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range</p>
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	statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	<p>1.1. Access, interpret and apply <i>compliance documentation and procedures</i> relevant to the work activity</p> <p>1.2. Work instructions, including plans, specifications, <i>quality requirements</i> and operational details are obtained, confirmed and applied to the allocated task</p> <p>1.3. Signage requirements are identified and obtained from the project traffic management plan and implemented</p> <p>1.4. Vehicle, <i>tools and equipment</i> selected to carry out <i>tip truck tasks</i> are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported</p> <p>1.5. Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allocated task</p>
2. Conduct machine pre-operational checks	<p>2.1. Pre-start, start-up, park and shutdown procedures are carried out</p> <p>2.2. Tip truck controls and functions, including tray, steering, brakes and manoeuvrability are checked for serviceability and any faults are rectified or reported</p>
3. Operate truck	<p>3.1. Site hazards associated with tip truck operations are identified and safe operating techniques are used to minimise risk</p> <p>3.2. Engine power is managed to ensure efficiency of truck movements and to minimise damage to the engine and gears</p> <p>3.3. Engine power is coordinated with gear selection ensuring smooth transition and operation within torque range</p> <p>3.4. <i>Tip truck</i> is operated to work instructions</p> <p>3.5. Road/traffic conditions are constantly</p>

	<p>monitored taking into account of road standards, traffic flow, distance and load, ensuring no injury to people or damage to property, equipment, loads and facilities</p> <p>3.6. Vehicle is brought to a halt smoothly, minimising the wear and tear on vehicle using the engine retarder, gears and brakes</p>
4. Load, transport and tip materials	<p>4.1. Vehicle is positioned at load and discharge points with a minimum of manoeuvre</p> <p>4.2. Tip truck movements including the raising and lowering of the tray are smooth and controlled</p> <p>4.3. Weight and distribution of load is assessed for type of <i>material</i> and size of vehicle to ensure it is within vehicle capacity</p> <p>4.4. Safety and security of load, including load cover requirements, are maintained from loading site to discharge site</p> <p>4.5. Load is discharged on slope and/or over face at fill site</p> <p>4.6. Material is dumped/spread evenly to work instructions</p> <p>4.7. Tray is cleared, lowered and secured before resuming travel</p>
5. Carry out operator maintenance	<p>5.1. Tip truck is safely parked, prepared for <i>operator maintenance</i> and shutdown</p> <p>5.2. Inspection and fault finding are conducted</p> <p>5.3. Defective parts are removed and replaced safely and effectively</p> <p>5.4. Regular programmed maintenance tasks are carried out</p>
6. Clean up	<p>6.1. Work area is cleared and materials disposed of or recycled</p> <p>6.2. Vehicle, tools and equipment are cleaned, checked, maintained and stored</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following as required to conduct tip truck operations:

- apply legislative, organisation and site requirements and procedures for conducting tip truck operations

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following as required to conduct tip truck operations:

- tip truck types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- site and equipment safety requirements
- tip truck operational techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheet and materials handling methods
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage
- load quantity calculations
- JSA's/safe work method statement

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:

- knowledge of the requirements, procedures and instructions for conducting tip truck operations

	<ul style="list-style-type: none"> • implementation of requirements, procedures and techniques for the safe, effective and efficient conduct of tip truck operations • working with others to undertake and complete the conduct of tip truck operations that meets all of the required outcomes • consistent timely completion of tip truck operations that safely, effectively and efficiently meets the required outcomes
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment should sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p>

	<ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirements, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete tip truck operations
<p>Guidance information for assessment</p>	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

Range Statement

<p>Compliance documentation and procedures may include:</p>	<ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • OHS requirements including protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • safe operating procedures including (but not limited to) recognising and preventing hazards associated with fill-site traffic movement, overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public • safe parking practices including (but not limited to) ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement • hazards and risks including (but not limited to) uneven/unstable terrain, trees, fires, overhead and
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	<p>underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials</p> <ul style="list-style-type: none"> • emergency procedures related to this unit including (but not limited to) emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation • environmental requirements including (but not limited to) organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Quality requirements may include:	<ul style="list-style-type: none"> • dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
Tools and equipment includes:	<ul style="list-style-type: none"> • the hand tools and maintenance equipment associated with the particular tip truck
Tip truck tasks should include:	<ul style="list-style-type: none"> • the transporting and tipping of soils, sand, rocks and construction gravels on public roads and worksites • static tipping and mobile tipping and spreading, discharging/tipping on slopes and discharging/tipping over edges • discharging into bins and hoppers and spreading aggregate
Tip trucks may include:	<ul style="list-style-type: none"> • self-propelled vehicle designed for on road use to transport a variety of construction materials to and from construction sites • vehicles that are rigid (with or without a dog trailer) or articulated • various configurations of tip trucks, the number of vehicle axles, the weight of each vehicle and load capacities are dependent on the vehicle class • loads that are normally discharged by tipping from the rear of the vehicle or trailer but, methods of material discharge may also include side and belly dumping • National Licence Classes for trucks • MR (Medium rigid) – a vehicle (2 axle only) which is greater than 8t GVM, plus a trailer of not more than 9t GVM • HR (Heavy Rigid) – a vehicle (no axle limit) which is

	<p>greater than 8t GVM, plus a trailer of not more than 9t GVM</p> <ul style="list-style-type: none"> • HC (Heavy combination) – a heavy rigid vehicle with a trailer greater than 9t GVM or a prime mover and semi trailer • MC (Multi combination) - multi-combination vehicles like Road Trains and B-Double Vehicles. Also includes vehicles in class 'HC'.
Materials may include:	<ul style="list-style-type: none"> • materials may include but are not limited to clays, silts, stone, gravel, mud, rock, sand, topsoil, bituminous mixes, timber, blended materials, organic materials, typical construction site materials/waste and aggregates • rock types may include metamorphic, igneous and sedimentary
Operator maintenance may include:	<ul style="list-style-type: none"> • cleaning, authorised servicing and the monitoring, recording and reporting of faults • the conduct of authorised minor replacements • the provision of assistance to maintenance personnel during maintenance and repair activities

Unit Sector(s)

Vehicle Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.

SIRRRPK010A Recommend home and home improvement products and services

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to provide advice to customers to assist their buying decisions regarding home and home improvement products and services.

Application of the Unit

This unit applies to frontline personnel who gain knowledge of the store home and home improvement product range to provide advice to customers and other sales team staff with regard to features and benefits, product availability and price, and advice on services available.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Research store product range.	<p>1.1. Develop <i>product knowledge</i> by accessing <i>relevant sources of information</i>.</p> <p>1.2. Identify <i>store product range</i>, according to relevant product information.</p>
2. Recommend home and home improvement products.	<p>2.1. Identify relevant products to meet expressed <i>customer requirements</i> to assist their buying decisions.</p> <p>2.2. Demonstrate <i>features and benefits of products to customers</i> to create a buying environment.</p> <p>2.3. Convey technical features and benefits as outlined in manufacturer specifications.</p>
3. Advise on product warranties.	<p>3.1. Clearly explain comparisons between product and manufacturer warranty terms to customers.</p> <p>3.2. Confirm individual product warranty terms and by accessing relevant sources of information and accurately conveying to customers.</p> <p>3.3. Provide customers with written information regarding individual product warranty terms and conditions, especially extended or promotional warranties, according to store policy and procedures.</p>
4. Estimate quantities and order product.	<p>4.1. <i>Estimate area and product quantities</i>, where required, based on manufacturer specifications, plan provided or customer needs.</p> <p>4.2. Arrange for area measurement where indicated by product type and according to store procedures.</p> <p>4.3. Calculate cost to customers and prepare quotes <i>according to store policy and procedures</i>.</p> <p>4.4. Order product and arrange customer pick up and delivery or installation where required.</p> <p>4.5. Provide customers with accurate information regarding product availability, delivery and installation procedures as required, including date and time of delivery.</p> <p>4.6. Notify customers promptly of any undue delays regarding completion, supply or installation of products.</p>
5. Negotiate price and	5.1. Convey store recommended retail pricing for various brand options accurately conveyed to customers according to legislative

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| payment options. | requirements. |
| | 5.2.Negotiate individual product prices according to store policy where necessary to achieve sales. |
| | 5.3.Convey store payment options to customers and negotiate preferred option following store procedures. |
| 6. Advise on and arrange product service and repair. | 6.1.Diagnose problem in terms of operator and equipment faults by observation, customer questioning and accessing manufacturer information. |
| | 6.2.Offer solutions according to nature of problem, available product information and store policy. |
| | 6.3.Identify and accurately describe service and repair process to customers, as required, according to store policy. |
| | 6.4.Prepare and supply quotations and timelines to customers for basic service and repairs. |
| | 6.5.Identify and accurately transcribe customer details to repair form according to store procedures. |
| | 6.6.Label and securely store items for repair according to store policy. |
| | 6.7.Notify customers without undue delay on completion of service and repair. |

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- interpersonal skills to:
 - apply product knowledge by providing information and advice to customers and staff, including advice on warranties and product service and repair
 - make recommendations and advise on services through clear and direct communication
 - ask questions to identify and confirm requirements
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
 - handle customers with special needs, including difficult or abusive customers
 - demonstrate product features and operation
 - negotiate price and payment options
- using and applying technology required to demonstrate operation of store product range
- literacy skills to:
 - interpret product information
 - interpret product warranties and guarantees

- numeracy skills to:
 - advise and negotiate price and payment options
 - measure and estimate accurately
 - use metric and imperial measuring scales
 - estimate measurements from architects or builders plans
- technical skills to take measurements from surface areas

Required knowledge

- store policy and procedures in regard to:
 - sales and customer service
 - methods of dealing with special needs and requests of customers
 - customer complaints
 - store pricing and payment and warranty terms and conditions, including GST requirements
 - store product service and repair policy and procedures
- store home and home improvement product range
- design and technical information and features and function and operation of store product range
- quality, energy efficiency and environmental considerations of products
- relevant industry codes of practice

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit Evidence of the following is essential:

- continually updates and applies product knowledge to provide comprehensive advice to customers and other sales team members
- understands and applies available product information when providing advice to customers
- consistently applies store policy and procedures and industry codes of practice in regard to sales and customer service procedures
- advises customers and informs other sales team members on store home and home improvement products in the store merchandise range. Advises customers and other sales team members on store merchandise range warranties and store pricing and payment options.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant sources of product information
- relevant documentation, such as:
 - store policy and procedures manuals
 - industry codes of practice and relevant legislation
 - WHS legislation and codes of practice
- an appropriate range of home and home improvement products
- a range of customers with different requirements.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

- Product knowledge*** may include:
- function
 - brand and product options
 - warranties
 - quality
 - accessories
 - component parts
 - storage and operation
 - design features
 - style
 - available colour range
 - manufacturing process

- price
- partner or complementary products
- country of manufacture
- energy efficiency
- safety features, including flammability
- environmental considerations
- materials and fibre types
- construction of products
- care and maintenance requirements
- stain and dirt resistance
- product performance
- colour fastness, colour fading properties
- availability.

Relevant sources of information may include:

- supplier product leaflets
- store product manuals
- energy rating information
- warranty information
- internet
- trade shows
- customer feedback
- consulting store information
- designated staff members
- contacting suppliers direct.

Store product range may include:

- home and home improvement products
- furniture products
- floor covering products and services
- kitchen and bathroom renovation products
- hardware products
- home gardening products
- soft furnishings
- manchester
- haberdashery.

Customer requirements may include:

- usage requirements
- lifestyle
- price range.

Features and benefits of products may include:

- product type
- product performance features
- product durability
- function
- warranties
- quality
- design aspects of colour and texture feel

- thickness and weight of furnishing fabrics
 - acoustic and thermal insulation properties of materials
 - manufacturing process
 - price
 - country of manufacture
 - energy efficiency
 - environmental considerations.
- Customers* may include:
- new and existing customers
 - people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities
 - customers with routine or special needs.
- Estimating area and product quantities* may include:
- using measuring tools
 - using a calculator
 - estimating from builders' and architects' plans
 - on-site measuring
 - estimating based on measurements provided by customer
 - making allowances for pattern matching
 - estimating linear or volume-based quantities.
- Store policy and procedures* may include:
- policy and procedures relating to sales, payment and credit options, store reward schemes and customer service.

Unit Sector(s)

Retail

Competency field

Product Knowledge

SIRRRPK214 Recommend specialised products and services

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRRRPK014A Recommend specialised products and services.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to recommend and provide advice on specialised products and services to customers.

It covers the application of specialised product knowledge to provide advice to customers and other sales staff, with regard to specific product features, technical characteristics, warranties and prices. It also includes the provision of information on organisation services and repairs.

Application of the Unit

This unit applies to experienced frontline sales staff working in a retail environment.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element

Performance criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

1. Demonstrate knowledge of product range.

- 1.1. Identify product and *service range*.
- 1.2. Demonstrate knowledge of location of product range.
- 1.3. Operate *inventory system*.
- 1.4. Develop *product knowledge* by accessing *relevant sources of information*.
- 1.5. Develop knowledge and application of manufacturer technical information and specifications of product range.
- 1.6. Research comparisons between products and services and communicate product information.
- 1.7. Convey product information to *customers* and other staff members as required and in line with organisational policies and procedures.

2. Advise on products and services to meet customer requirements.

- 2.1. Identify and evaluate *customer requirements* to provide advice on product suitability to assist buying decisions.
- 2.2. Determine suitability of products and materials according to customer requirements and manufacturer specifications.
- 2.3. Provide accurate advice on product specifications to meet customer requirements according to *relevant legislation*.
- 2.4. Convey features and benefits of products to customers to assist buying decisions.
- 2.5. Demonstrate or explain use and operation of products to customers in a systematic manner as required to create a buying environment and in line with organisational policies and procedures.
- 2.6. Apply correct measuring, fitting or sizing procedures as relevant to the product.
- 2.7. Explain relevant maintenance and care requirements of product to customer.
- 2.8. Clearly explain to customer safety features and safe usage relevant to the product.
- 2.9. Maximise sales opportunities by use of add-on and complementary sales techniques.

- 2.10. Estimate quantities of product required and communicate to customer.
3. Advise on product warranties.
 - 3.1. Clearly explain to customer **comparisons** between product and manufacturer warranty terms.
 - 3.2. Confirm and convey individual product warranty terms and conditions to customer by accessing relevant sources of information.
 - 3.3. Provide customer with written information regarding individual product warranty terms and conditions, especially extended or promotional warranties, according to legislative requirements and **organisational policy and procedures**.
4. Quote on price and payment options.
 - 4.1. Calculate organisation-recommended pricing for various product and service options and convey to customer according to legislative requirements.
 - 4.2. **Negotiate individual product prices** where appropriate according to pricing determinants and organisational policy.
 - 4.3. Convey payment and credit options to customer and negotiate a preferred option following organisational procedures.
5. Advise on and arrange product service and repair.
 - 5.1. Advise customer on range of service and repairs according to organisational policy and procedures.
 - 5.2. Question and actively listen to customer to determine nature of problem.
 - 5.3. Complete **diagnosis of problem** in terms of operator and equipment faults.
 - 5.4. Offer solutions according to nature of problem, available product information, and organisational policy.
 - 5.5. Identify service and repair process and communicate to customer according to company and enterprise policy.
 - 5.6. Identify price and timelines for basic service and repairs and quote to customer where applicable.
 - 5.7. Identify customer details and transcribe to service report according to organisational procedures and legislative requirements.
 - 5.8. Label and securely store item for repair according to organisational policy.
 - 5.9. Organise service according to availability, customer requirements and legislative requirements.
 - 5.10. Notify customer without undue delay on completion of service and repair.
 - 5.11. Take **follow-up action** as necessary to ensure customer satisfaction.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:
 - apply product knowledge by providing information and advice to customers and staff
 - ask questions in order to identify and confirm requirements
 - handle customers with special needs, including difficult or abusive customers
 - interpret and apply non-verbal cues
 - make recommendations and advise on warranties and product service and repair through clear and direct communication
 - respond to customer needs and respect cultural differences
- literacy and numeracy skills to:
 - advise and negotiate price and payment options
 - measure and estimate accurately
 - read and interpret warranties
 - read and interpret product information and specifications
 - read and interpret store policy and procedures
 - write order specifications and delivery details

Required knowledge

- manufacturer technical information
- organisational policy and procedures in regard to:
 - customer complaints
 - methods of dealing with special needs and requests of customers
 - price negotiation and payment options
 - returns and warranty claims
 - sales and customer service, up-selling and on-selling
 - services and repairs
- organisation's product range
- manufacturer technical information
- pricing procedures, including GST requirements
- product and manufacturer warranty terms and conditions
- relevant industry codes of practice, legislation and statutory requirements relating to the recommendation of specialised products and services

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- updates and applies product knowledge to provide comprehensive advice to customers and staff, including technical information and advice on warranties and insurance policies where applicable
- applies organisational policy and procedures and industry codes of practice in regard to sales and customer service procedures
- advises customers and informs sales team members of organisation's range of products, their features and benefits, performance, complementary products, product availability and warranties
- advises customers and sales team members on operation, storage and use of products
- estimates and quotes on quantities of product required, as relevant to the product and customer requirements
- negotiates and administers price and payment options with customers as per organisational policy and procedures
- advises on and arranges for internal and external organisation services, including repairs, according to organisational policy and procedures.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail work environment
- relevant sources of product information
- relevant documentation, such as:
 - organisational policy and procedures manuals
 - industry codes of practice and relevant legislation
 - organisational inventory
- an appropriate range of products
- a range of customers with different requirements.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- customer feedback
- written or verbal answers to questions about specific

skills and knowledge

- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

Service range may include:

- delivery
- finance options
- installation
- insurance facilities
- material measuring and cutting
- product service and repairs.

Inventory system may be:

- centralised
- electronic
- manual.

Product knowledge may include:

- accessories
- age suitability and rating
- available styles, sizes and colour range
- brand options
- component parts
- country of manufacture
- design features
- durability
- energy efficiency
- environmental considerations and recycled products
- health and hygiene
- manufacturing process and construction
- materials, ingredients and composition
- operation
- performance
- price
- quality

Relevant sources of information may include:

- safety features and toxicity
- storage and care requirements
- supply and availability
- sustainability characteristics, such as:
 - recyclable
 - non-toxic
- warranties
- workmanship.
- catalogues
- contacting suppliers direct
- customer feedback
- designated staff members
- internet
- manufacturer brochures and specifications
- organisation or trade product manuals
- supplier product leaflets
- trade shows.

Customers may include:

- individuals or organisations
- people from a range of social, cultural and ethnic backgrounds
- people with varying physical and mental abilities
- people with routine or special requests
- people with special needs
- regular and new customers.

Customer requirements may include:

- age suitability
- colour preferences and style
- culture and ethnicity
- durability, function and usage
- existing skills and knowledge
- fashion and preferences
- health factors
- interests
- lifestyle
- price
- size
- usage requirements.

Relevant legislation may relate to:

- censorship, licensing and copyright laws relevant to the retail sales environment
- customs regulations
- industry codes of practice
- work health and safety (WHS)
- pricing procedures, including GST requirements

- privacy laws
 - sale of second-hand goods
 - Australian consumer law relevant to the retail sales environment.
- Comparisons* between product and manufacturer warranty terms may relate to:
- benefits
 - duration
 - features
 - limitations
 - price, where applicable.
- Organisational policy and procedures* may include:
- interaction with customers
 - processing items for service and repair
 - selling specialised products and services.
- Negotiating individual product prices* may include:
- adding value to purchase
 - bulk discounts
 - individual discounts
 - price matching.
- Diagnosis of problem* may occur:
- by electronic or postal correspondence
 - by telephone
 - face-to-face.
- Follow-up action* may occur:
- by appointment
 - by electronic or postal correspondence
 - by telephone
 - face-to-face
 - formally or informally.

Unit Sector(s)

Retail

Competency field

Product Knowledge

SIRXADM001A Apply retail office procedures

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to apply retail office procedures. It involves processing mail, operating office equipment, filing and retrieving documents, establishing contact with customers and preparing simple correspondence.

Application of the Unit

This unit applies to sales and administrative staff who operate and maintain office equipment, receive and dispatch correspondence in a variety of formats, file and retrieve documents, communicate with internal and external customers, and prepare simple correspondence according to store policy and procedures.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Process incoming and outgoing mail.	<p>1.1. <i>Sort and dispatch incoming mail</i> to nominated recipients or locations.</p> <p>1.2. Collect and check outgoing mail to ensure all items are correctly prepared for dispatch.</p> <p>1.3. Record mail according to <i>store policy and procedures</i>.</p> <p>1.4. Dispatch mail within designated time limits.</p>
2. Process bulk mail.	<p>2.1. Collate documents as required.</p> <p>2.2. Sort and batch envelopes according to Australia Post specifications.</p> <p>2.3. Lodge batched items for delivery.</p>
3. Operate office equipment.	<p>3.1. Identify appropriate <i>equipment</i> for intended application.</p> <p>3.2. Operate equipment according to manufacturer instructions.</p> <p>3.3. Identify and rectify equipment faults or report to <i>relevant personnel</i>.</p> <p>3.4. Follow opening and shutdown processes according to store procedures.</p> <p>3.5. Apply maintenance program for equipment to ensure down time is minimised.</p>
4. File and retrieve documents.	<p>4.1. <i>File documents</i> according to store policy.</p> <p>4.2. Identify and retrieve documents as requested.</p> <p>4.3. Update and modify existing records.</p> <p>4.4. Remove, process and store designated inactive files according to store policy.</p>
5. Establish contact with internal and external customers.	<p>5.1. Use telephone system functions according to store policy.</p> <p>5.2. Obtain and accurately record telephone and fax number or email <i>address</i>.</p> <p>5.3. Answer incoming calls promptly and according to store policy.</p> <p>5.4. Establish and clearly convey purpose of <i>contact</i>.</p> <p>5.5. Transfer or place calls on hold as required.</p> <p>5.6. Keep customers informed of delays and action being taken.</p> <p>5.7. Record messages accurately and promptly return calls if</p>

required.

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| 6. Prepare simple correspondence. | 6.1.Prepare and present correspondence for approval or signature according to set timeframes.
6.2.Write text using clear, concise language.
6.3.Use correct spelling, punctuation and grammar.
6.4.Use standard form letters according to store policy. |
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Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- technical skills to operate a range of office technology
- planning and organising skills to complete tasks in a set timeframe
- literacy and numeracy skills to:
 - process, record and document information
 - generate a range of retail documents
- interpersonal communication skills to:
 - report equipment faults
 - answer telephone calls and keep customers informed of delays and action being taken through clear and direct communication
 - ask questions to identify and confirm requirements
 - share information
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication

Required Knowledge

- store policy and procedures in regard to:
 - store administration and clerical systems
 - receiving and dispatching incoming and outgoing mail
 - processing information
 - reporting problems and faults
- relevant regulatory and licensing requirements, such as:

- Work Health and Safety (WHS)
- privacy policies

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- applies procedures for the processing of mail, including bulk mail
- operates and maintains office equipment according to store policy and procedures
- files and retrieves documents according to store policy and procedures
- follows procedures for establishing contact with internal and external customers
- applies procedures for the preparation of simple correspondence.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated work environment
- relevant documentation, such as:
 - store policy and procedures manuals
 - manufacturer instructions and operation manuals
- a range of retail equipment.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a role play
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXICT001A Operate retail technology
- SIRXFIN002A Perform retail finance duties.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

- Procedures to ***sort and dispatch incoming mail*** may relate to:
- internal systems
 - Australia Post
 - courier services.
- Store policy and procedures*** in regard to:
- store administration
 - clerical systems
 - operating and maintaining retail equipment.
- Equipment*** may include:
- fax machine
 - telephone system
 - photocopier
 - answering machine or voicemail
 - public address system
 - paging system
 - franking machine
 - typewriters
 - computers
 - calculators
 - adapted equipment for people with a disability, for example, talking calculators, computer hard and software, and TTY.
- Relevant personnel*** may include:
- supervisor
 - team leader
 - manager.
- Systems used to record or ***file documents*** may be:
- manual
 - electronic.
- Contact*** may be established by:
- telephone
 - fax
 - email
 - letter
 - face-to-face contact.

Unit Sector(s)

Cross-Sector

Competency field

Administration

SIRXCCS201 Apply point-of-sale handling procedures

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release Date	Comments
First Release:	This is a revised unit, based on and equivalent to SIRXCCS001A Apply point-of-sale handling procedures.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to operate point-of-sale equipment, apply store policy and procedures to a range of transactions, interact with customers, and package or wrap an item for transportation.

It covers demonstration of the ability to operate a range of point-of-sale equipment in order to complete sales, returns and exchange transactions, and process a number of methods of payment, according to store policies.

Application of the Unit

This unit applies to frontline service personnel.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Operate point-of-sale equipment.	<p>1.1. Open and close point-of-sale terminal according to <i>store policy and procedures</i>.</p> <p>1.2. Clear point-of-sale terminal and transfer tender according to store procedure.</p> <p>1.3. Handle cash according to store security procedures.</p> <p>1.4. Maintain supplies of change in point-of-sale terminal according to store policy.</p> <p>1.5. Attend active point-of-sale terminals according to store policy.</p> <p>1.6. Complete records for transaction errors according to store policy.</p> <p>1.7. Maintain adequate supplies of dockets, vouchers and <i>point-of-sale documents</i>.</p> <p>1.8. Inform <i>customers</i> of delays in the point-of-sale operation where required.</p>
2. Ensure accuracy of transactions.	<p>2.1. Identify and perform <i>numerical calculations</i> to ensure accurate pricing and collection of money.</p> <p>2.2. Collect numerical information from various sources and calculate accurately with or without the use of a calculator.</p>
3. Perform point-of-sale transactions.	<p>3.1. Complete <i>point-of-sale transactions</i> according to store policy.</p> <p>3.2. Identify and apply store procedures in respect of cash and non cash transactions.</p> <p>3.3. Identify and apply store procedures in regard to exchanges and returns.</p> <p>3.4. Move goods through point-of-sale area efficiently and with attention to fragility and packaging.</p> <p>3.5. Enter information into <i>point-of-sale equipment</i>.</p> <p>3.6. State price or total and amount of cash received verbally to customer.</p> <p>3.7. Tender correct change.</p>

4. Complete sales.
 - 4.1. Complete customer order forms, invoices and receipts and process any loyalty card transactions.
 - 4.2. Identify and process customer delivery requirements according to set timeframes.
 - 4.3. Process sales transactions or direct customers to point-of-sale terminals according to store policy without undue delay.
 - 4.4. Acknowledge and thank customer in line with store policy and procedures.
5. Wrap and pack goods.
 - 5.1. Maintain and request adequate supplies of ***wrapping and packaging materials***.
 - 5.2. Select appropriate wrapping or packaging material.
 - 5.3. Wrap merchandise neatly and effectively where required.
 - 5.4. Pack items safely to avoid damage in transit, and attach labels where required.
 - 5.5. Arrange transfer of merchandise for parcel pick up or other ***delivery methods*** if required.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:
 - ask questions to identify and confirm requirements
 - inform customers of delays
 - listen actively
 - request adequate supplies of wrapping material or bags through clear and direct communication
 - share information
 - state price or total and amount of cash received
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
- self-management skills to:
 - deal with different types of transactions
 - follow set routines and procedures
- literacy and numeracy skills to:
 - document sales and delivery information
 - render change
 - undertake work functions, including addition, division, multiplication, percentages and subtraction

Required knowledge

- cash and non-cash handling procedures, including:
 - balancing point-of-sale equipment
 - calculating non-cash documents
 - change required, denominations of change and tendering change
 - clearance of terminal and transference of tender
 - counting cash
 - maintenance of cash float
 - opening and closing point-of-sale terminal
 - recording takings
 - security of cash and non-cash transactions
- functions and procedures for operating point-of-sale equipment, including:
 - calculators
 - electronic scales
 - numerical display board
 - registers
- merchandise handling techniques, including wrapping and packaging techniques
- range of services provided by the store
- relevant legislation and statutory requirements, including:
 - industry codes of practice
 - work health and safety (WHS)
 - Australian consumer law
 - scanners
- store policy and procedures in relation to:
 - allocated duties and responsibilities
 - bag checking
 - customer service
 - exchanges and returns
 - handling, packing and wrapping goods or merchandise
 - point-of-sale transactions
- stock availability
- key features of a calculator

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none">• operates point-of-sale equipment according to manufacturer instructions and store policy and procedures• applies store policy and procedures in regard to cash handling and point-of-sale transactions• interprets, calculates and records numerical information accurately• processes sales transaction information responsibly and accurately according to store policy and procedures• applies store policy and procedures in regard to the handling, packing, wrapping and delivery of goods or merchandise.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none">• a real or simulated retail work environment• relevant documentation, such as:<ul style="list-style-type: none">• stock, inventory and price lists• financial transaction dockets and slips• lay-by, credit and product return slips• store policy and procedures manuals• a range of point-of-sale equipment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none">• observation of performance in the work• role play• customer feedback• answers to questions about specific skills and knowledge• review of portfolios of evidence and third-party workplace reports of on-the-job performance.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, work and job role is recommended, for example:</p> <ul style="list-style-type: none">• SIRXCCS202 Interact with customers• SIRXFIN201 Balance and secure point-of-sale terminal• SIRXINV001A Perform stock control procedures• SIRXRSK201 Minimise loss.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the

performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

- Store policy and procedures*** in regard to:
- cash handling
 - financial transactions
 - handling techniques of stock
 - operation of point-of-sale equipment
 - sales transactions
 - security.
- Point-of-sale documents*** may include:
- credit slips
 - lay-by slips
 - message pads
 - order forms
 - product return slips
 - promotional materials.
- Customers*** may include:
- customers with routine or special requests
 - internal and external contacts
 - new or repeat contacts
 - people from a range of social, cultural and ethnic backgrounds
 - people with varying physical and mental abilities.
- Numerical calculations*** may include:
- addition and subtraction
 - calculations of cash amounts and change
 - calculations of discount amounts
 - estimation of quantities
 - measurement
 - multiplication and division
 - percentages.
- Point-of-sale transactions*** may include:
- cheques
 - credit cards and store cards
 - EFTPOS
 - exchanges
 - gift vouchers
 - lay-by
 - returns
 - smart cards
 - travellers cheques.
- Point-of-sale equipment*** may include:
- cash drawer
 - cash register
 - EFTPOS terminal
 - electronic scales
 - numerical display board

Wrapping and packaging materials may include:

- scanner
- security tagging.
- adhesive tape
- bags
- boxes
- bubble wrap
- gift wrapping
- paper
- ribbon
- string.

Delivery methods may include:

- courier
- domestic or international delivery
- freight
- parcel pick-up
- post or express post.

Unit Sector(s)

Cross-Sector

Competency Field

Client and Customer Service

SIRXCCS202 Interact with customers

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release Date	Comments
First Release:	This is a revised unit, based on and equivalent to SIRXCCS002A Interact with customers.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to deliver service to customers. It involves being able to communicate effectively with customers, respond to their complaints, receive and process sales orders, and identify special customer requirements.

The unit covers the consistent application of store policies and industry codes of practice to provide a quality service environment by treating customers and team members in a courteous and professional manner through all stages of the service and sales procedure, and to identify and resolve customer complaints.

Application of the Unit

This unit applies to frontline service personnel.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Deliver service to customers.	<p>1.1. <i>Communicate</i> with <i>customers</i> in a professional, courteous manner according to store policy.</p> <p>1.2. Meet <i>customer needs</i> and reasonable requests or refer to supervisor, according to store policy and <i>legislative requirements</i>.</p> <p>1.3. Record customer details and information where necessary.</p> <p>1.4. Identify and anticipate possible problems and take action to minimise the effect on customer satisfaction.</p> <p>1.5. Recognise and act upon opportunities to deliver additional levels of <i>service</i> beyond the customer's immediate request.</p> <p>1.6. Maintain contact with customer until sale is completed according to store policy.</p> <p>1.7. Use verbal and non-verbal communication to develop rapport with customers during service delivery.</p> <p>1.8. Encourage repeat customers by promotion of appropriate services or products according to store policy.</p> <p>1.9. Farewell customer appropriately and courteously according to store policy.</p>
2. Respond to customer complaints.	<p>2.1. Convey a positive, helpful attitude to customers when handling <i>complaints</i>, according to store policy.</p> <p>2.2. Handle complaints sensitively, courteously and with discretion.</p> <p>2.3. Establish and confirm with customer nature of complaint by active listening and questioning.</p> <p>2.4. Take action to resolve complaint to customer's satisfaction wherever possible.</p> <p>2.5. Promptly refer unresolved customer dissatisfaction or</p>

- complaints to supervisor.
- 2.6. Take the opportunity to turn incidents of customer dissatisfaction into a demonstration of high-quality service to customer according to store policy.
 - 2.7. Complete documentation regarding customer dissatisfaction or complaints accurately and legibly.
 - 2.8. Take **follow-up action** as necessary to ensure customer satisfaction.
3. Receive and process sales orders.
 - 3.1. Record customer details and information accurately.
 - 3.2. Promptly refer customers to appropriate area as required.
 - 3.3. Provide customers with information in clear, concise manner.
 - 3.4. Process, record and act upon sales orders according to store policy.
 - 3.5. Process customer returns or refunds according to store policy and procedures.
 4. Identify special customer requirements.
 - 4.1. Promptly identify customers with special needs or requirements by observation and questioning.
 - 4.2. Verbally and non-verbally convey a willingness to assist.
 - 4.3. Promptly service, refer or redirect customers' needs as required.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:
 - build rapport and understanding
 - clarify and feed back information
 - deal with difficult customers
 - listen to customers' needs
 - negotiate with and persuade customers to buy
 - promote products and services
 - respond to complaints effectively and politely
- literacy and numeracy skills to:
 - calculate costs and discounts
 - document sales, stock and delivery information
 - follow procedures for recording customer orders that are placed in person, by telephone or by electronic means

- handle legal tender
- take messages in person or by telephone
- write records of complaints
- weigh and measure goods
- observation and analysis skills to anticipate customer behaviour
- self-management skills to follow set routines and procedures

Required knowledge

- add-on selling concepts
- conflict-resolution strategies
- functions and procedures for operating the store telephone system and other communication equipment, and the relevant numbers
- greeting and farewelling techniques
- location of store departments
- merchandise and service range of store departments
- non-verbal cues indicating customer behaviour
- questioning and active listening techniques
- relevant legislation and statutory requirements, including work health and safety (WHS)
- store policy and procedures in regard to:
 - customer service
 - dealing with customer complaints
 - allocated duties and responsibilities
 - customer returns and refunds
 - lay-by, gift voucher and rain-check procedures
- strategies for handling difficult or abusive customers

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- accesses, records and processes sales orders accurately and responsibly, according to store policy and procedures
- identifies the nature of customer complaints, resolves complaints and provides service to customers according to store policies
- collaboratively works within a team to meet customers' needs

- applies store policy and procedures and industry codes of practice in regard to customer service
- provides a quality service environment by treating customers and team members in a courteous and professional manner through all stages of the service and sales procedure
- uses effective questioning, active listening and observation skills to identify special customer requirements.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail work environment
- relevant documentation, such as:
 - sales order forms
 - complaint and return forms
 - stock, inventory and price lists
 - store policy and procedures manuals
- a range of customers with different requirements
- point-of-sale equipment and materials
- a communication system or a range of communication equipment.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- role play
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXCCS201 Apply point-of-sale handling procedures
- SIRXFIN201 Balance and secure point-of-sale terminal
- SIRXINV001A Perform stock control procedures
- SIRXRSK201 Minimise loss.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility

of the item, and local industry and regional contexts) may also be included.

Communication

techniques may include:

- face-to-face or telephone contact with customers
- non-verbal communication
- speaking clearly and concisely
- using appropriate language
- using open and inclusive language.

Customers may include:

- customers with routine or special requests
- internal and external contacts
- new or repeat contacts
- people from a range of social, cultural and ethnic backgrounds
- people with varying physical and mental abilities.

Store policy may relate to:

- cash handling
- customer service
- dealing with customer complaints
- processing sales orders.

Customer needs may include:

- information regarding store facilities and services
- location of specific items within the store
- product information
- returns or refunds.

Legislative requirements may include:

- liquor licensing regulations
- lottery legislation
- sale of second-hand goods
- sale of X and R-rated products
- tobacco laws
- Trade Practices Act
- trading hours
- transport, storage and handling of goods.

Service may include:

- all store activities
- internal and external customers
- follow-up in event of delays in service provision.

Complaints may relate to:

- prices
- products
- service.

Follow-up action may require:

- communication with:
 - customers
 - staff
 - supervisors and management
 - suppliers
- recommendations to supervisor regarding policy and procedure development or alteration.

Unit Sector(s)

Cross-Sector

Competency Field

Client and Customer Service

SIRXFIN002A Perform retail finance duties

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to perform retail finance duties. It involves processing petty cash and non-cash transactions, preparing banking documents, reconciling invoices for payment and preparing invoices for debtors.

Application of the Unit

This unit applies to team members who process petty cash, cash and non-cash transactions; reconcile and process banking; identify and rectify delivery and document discrepancies; and process invoices for creditors and debtors, according to store policy and procedures. These tasks are performed under some supervision.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Process petty cash transactions.	1.1. Check petty cash claims for approval, accuracy and authenticity before processing. 1.2. Check and balance transactions according to <i>store policy and procedures</i> . 1.3. Note irregularities and refer to <i>relevant personnel</i> for resolution. 1.4. Process and record petty cash transactions within designated time limits.
2. Prepare banking documents.	2.1. Balance cashbook entries against record of takings. 2.2. Compile and balance deposit entries. 2.3. List cash and <i>non cash transactions</i> on banking deposit forms, according to the banking institution's guidelines. 2.4. Process in store credit systems according to store policy.
3. Process non cash transactions.	3.1. Balance non cash transactions and present <i>documentation</i> to relevant personnel for checking. 3.2. Note irregularities and refer to relevant personnel for resolution.
4. Reconcile invoices for payment to creditors.	4.1. Identify discrepancies between invoices and delivery notes and report to relevant personnel or section for resolution. 4.2. Identify errors in invoice charges and report to relevant personnel or section for correction or resolution. 4.3. Rectify discrepancies and errors as directed. 4.4. Process corrected and authorised invoices for payment within designated time limits. 4.5. Resolve creditor enquiries or refer to relevant personnel or section for resolution.
5. Prepare invoices for debtors.	5.1. Perform <i>preparatory calculations</i> to produce accurate customer invoices. 5.2. Complete relevant documentation to ensure accuracy of contents. 5.3. Distribute documents to relevant personnel or section for certification prior to being dispatched. 5.4. Dispatch verified documents within designated time limits. 5.5. Copy and <i>file</i> documents for auditing purposes.

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- self management skills to complete tasks within a set timeframe
- literacy skills to interpret documentation
- numeracy skills to:
 - process petty cash transactions
 - receive and process deliveries
 - perform sales transactions
 - balance cashbook entries and takings
 - generate invoices
- interpersonal skills to:
 - refer and report irregularities, discrepancies and errors in transactions to relevant personnel
 - resolve creditor enquiries or refer to relevant personnel through clear and direct communication
 - ask questions to identify and confirm requirements
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication

Required knowledge

- store policy and procedures in regard to:
 - register or terminal balance
 - security of cash and non-cash transactions
 - petty cash
 - cash balances
 - banking procedures
 - purchase requisitions or orders
 - issuing of receipts
 - delivery dockets
 - credit notes
 - statements
 - remittance advices
 - cash register rolls
 - deposit books
 - change required and denomination of change
 - operation of equipment used at register or terminal

- processing delivery and delivery document discrepancies
- invoicing procedures for debtors and creditors
- payment and invoice procedures, including GST requirements
- cash and non-cash handling procedures, including:
 - opening and closing point-of-sale terminal
 - clearance of terminal and transference of tender
 - maintenance of cash balances
 - counting cash
 - calculating non-cash documents
 - customer credit ratings
 - balancing point-of-sale terminal
 - recording takings
 - change required and denominations of change
 - EFTPOS
 - credit cards
 - processing of cheques
 - gift vouchers
 - lay-by
 - cash on delivery (COD)
 - lay-by
 - credits and returns
 - customer refunds

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- consistently applies store policy and procedures in regard to petty cash and non-cash transactions, invoicing, banking processes and processing delivery and document discrepancies
- consistently applies skills related to the reconciliation and payments of invoices for creditors and debtors, according to store policy and procedures.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated work environment

- relevant documentation, such as:
 - store policy and procedures manuals
 - financial transaction dockets, slips and invoices
 - banking deposit forms
- EFTPOS facilities and equipment
- registers and related equipment
- relevant financial management systems.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a role play
- third-party reports from a supervisor
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXADM001A Apply retail office procedures
- SIRXICT001A Operate retail technology.

Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Store policy and procedures in regard to:

- store financial systems.

Relevant personnel may include:

- manager
- supervisor
- team leader
- specialist staff.

Non-cash transactions may include:

- EFTPOS and credit cards
- customer credit ratings
- cheques
- hire-purchase
- lay-by

Documentation may include:

- cash on delivery (COD)
- customer refunds.
- purchase requisitions
- purchase orders
- invoices
- receipts
- delivery dockets and receipts
- credit notes
- statements
- remittance advices
- cash register rolls
- deposit books.

Preparatory calculations may include:

- application of prior credit
- discounting
- quantity
- calculation of GST.

Methods used to *file* documents may include:

- manual
- electronic.

Unit Sector(s)

Cross-Sector

Competency field

Finance

SIRXFIN003A Produce financial reports

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to produce financial reports in a retail environment. It involves entering payment summaries into journals, reconciling accounts to balance, preparing bank reconciliations, and receiving and documenting payments and takings. It also involves dispatching statements to debtors, dispatching payments to creditors and preparing financial reports.

Application of the Unit

This unit applies to team members who produce accurate financial reports according to store policy and procedures. It requires the accurate and effective recording of data for preparation of trial balances, and receiving, recording and dispatching records and payments to debtors and creditors. These tasks are performed under some supervision.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Enter payment summaries into journals.	1.1.Fill payment documents out identifying relevant details. 1.2.Check payment documents for authenticity of claim. 1.3.Balance payment documents on a routine basis.
2. Reconcile accounts to balance.	2.1.Identify discrepancies between <i>transaction</i> documentation and account balances. 2.2.Rectify errors in documentation. 2.3.Record data on <i>nominated system</i> within designated time limits.
3. Prepare bank reconciliations.	3.1.Check deposit entries and cash payment summaries for accuracy against bank statements. 3.2.Note and resolve discrepancies. 3.3.Produce regular reconciliation reports within designated time limits to provide data for preparation of trial balance. 3.4.Complete pay in documentation accurately. 3.5.Balance all transaction calculations.
4. Receive and document payments and takings.	4.1.Count cash correctly and give correct change, if applicable. 4.2.Verify cheque and credit card payments with the <i>relevant personnel</i> or department prior to acceptance. 4.3.Complete and issue receipts.
5. Dispatch statements to debtors and follow up outstanding accounts.	5.1.Check debtor statements for accuracy of contents. 5.2.Rectify any noted discrepancies accurately. 5.3.Dispatch debtor statements within designated time limits. 5.4.Collect outstanding accounts within designated credit periods. 5.5.Review and control credit terms to ensure payment within designated time limits. 5.6.Maintain debtors ledger to reflect current situation. 5.7.Review customer credit terms when indicated, according to <i>store policy and procedures</i> .
6. Dispatch payments to creditors.	6.1.Check payment documentation prepared by others for accuracy of information and dispatch to creditors within designated time limits.

- 6.2.Reconcile creditors' statements with accounting *records*.
- 6.3.Input relevant data to creditors' ledger.
- 6.4.Reconcile general ledger against accounting records.
- 7. Generate financial documents.
 - 7.1.Clarify purpose of the report with relevant personnel.
 - 7.2.Identify and obtain relevant data from nominated internal or external *sources*.
 - 7.3.Update nominated internal records to show current status of financial report.
 - 7.4.Transcribe data onto nominated form and in the authorised manner.

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- literacy skills to:
 - interpret documentation
 - write reports
- numeracy skills to:
 - reconcile accounts
 - count cash
 - calculate non-cash transactions
 - report on takings
- interpersonal skills to:
 - verify cheque and credit card payments with relevant personnel or department prior to acceptance
 - clarify purpose of report with relevant personnel
 - identify and obtain relevant data through clear and direct communication
 - ask questions to identify and confirm requirements
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication

Required knowledge

- store policy and procedures in regard to:
 - register or terminal balance
 - cash and non-cash transactions security
 - cash balances
 - banking procedures
 - purchase requisitions and orders

- issuing of receipts
- delivery dockets
- credit notes
- statements
- remittance advices
- cash register rolls
- deposit books
- change required and denomination of change
- operation of equipment used at register or terminal
- processing delivery document discrepancies
- invoicing procedures for debtors and creditors
- payment and invoice procedures, including GST requirements
- relevant legislation and statutory requirements
- cash and non-cash handling procedures, including:
 - balancing point-of-sale terminal
 - recording takings
 - security of cash and non-cash transactions
 - change required and denominations of change
 - EFTPOS
 - credit cards
 - gift vouchers
 - lay-by
 - credits and returns

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment Evidence of the following is essential:

and evidence required to demonstrate competency in this unit

- consistently applies store policy and procedures when producing financial reports
- consistently applies store policy and procedures in regard to handling cash
- consistently applies store policy and procedures in regard to the accurate and effective recording of data for reporting and processing document discrepancies and the reconciliation of reports for preparation of trial balances

- consistently applies store policy and procedures in regard to receiving, recording and dispatching to debtors and creditors
- applies follow-up procedures for outstanding accounts.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
 - financial transaction dockets, slips and invoices
 - recording and tally sheets
 - store policy and procedures manuals
- recording, documenting and filing systems
- registers and related equipment, including EFTPOS facilities and equipment.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Transactions may include:

- cash
- cheque
- credit card
- EFTPOS
- store card
- internet payments
- lay-by
- gift vouchers

- Nominated system*** may include:
- returns.
 - recording
 - documenting
 - reporting systems
 - accounting.
- Relevant personnel*** may include:
- supervisor
 - team leader
 - manager.
- Store policy and procedures*** in regard to:
- financial systems
 - cash handling
 - reconciling accounts.
- Records*** may be:
- manual
 - electronic.
- Sources*** may include:
- staff members
 - formal or informal reports
 - written or verbal data
 - formal or informal meetings
 - quantitative and qualitative data.

Unit Sector(s)

Cross-Sector

Competency field

Finance

SIRXFIN004A Manage financial resources

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop and implement financial control systems. It involves controlling cost and budget, maintaining store accounting systems and developing and negotiating budget allocations.

Application of the Unit

This unit applies to personnel with managerial responsibility who maintain accurate accounting systems to successfully negotiate, develop and implement store budgets, and analyse and report on income and expenditure against budget targets, according to store policy and procedures.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Control costs.	<p>1.1. Implement cost reduction measures according to <i>store policy and procedures</i>.</p> <p>1.2. Assess and interpret <i>information</i> on costs and <i>resource</i> allocation.</p> <p>1.3. Encourage <i>team members</i> actively to control costs in their areas of responsibility.</p> <p>1.4. Promptly implement recommendations for improving cost reduction or <i>communicate to relevant personnel</i>.</p>
2. Control budget.	<p>2.1. Monitor and maintain expenditure within budget targets according to store policy.</p> <p>2.2. Compare actual income and expenditure to budget targets at regular intervals, according to store policy.</p> <p>2.3. Monitor, analyse and compare gross profit and loss figures by department or section and store, with budget targets.</p> <p>2.4. Monitor and analyse net profit figures, including floor space profitability, according to budget targets.</p> <p>2.5. Monitor and analyse stock turnover figures according to budget targets.</p> <p>2.6. Promptly inform relevant personnel, where potential occurs for budget under or overspend.</p> <p>2.7. Take prompt corrective action where significant deviations from budget occur.</p> <p>2.8. Negotiate necessary changes or allocations to agreed budget in advance of requirement.</p> <p>2.9. Ensure modifications to existing budgets are authorised according to store policy.</p>
3. Propose expenditure.	<p>3.1. Ensure estimates of costs and benefits are supported by valid, relevant information.</p> <p>3.2. Ensure final recommendations are supported by realistic alternatives and contain accurate, clear <i>proposals</i>.</p> <p>3.3. Ensure recommendations clearly indicate net benefits over designated timeframe and related changes in operations.</p> <p>3.4. Clarify contentious issues by further explanation.</p>

- 3.5. Compare estimates to actual costs and benefits to improve future proposals.
4. Maintain store accounting systems.
- 4.1. Manage and maintain store policy and procedures in regard to **record-keeping systems**.
- 4.2. Monitor and maintain store systems for recording sales figures, revenue and expenditure.
- 4.3. Monitor and maintain systems for recording and retrieving financial, personnel and payroll information as required by store policy.
5. Prepare store sales budgets.
- 5.1. Maintain store policy and procedures in regard to preparation of **budget or target figures**.
- 5.2. Compare, analyse, document and report budget and actual sales revenue and expenditure figures, according to budget targets and store policy.
- 5.3. Maintain accurate records on past sales budgets or targets according to store policy.
- 5.4. Present proposed budgets or targets accurately and concisely.
- 5.5. Justify variations to proposed targets and report according to store policy.
6. Negotiate budgets.
- 6.1. Conduct budget negotiations within a set timeframe and in a manner likely to promote good relationships.
- 6.2. Ensure budget negotiations reflect the overall store policies and objectives relevant to the manager's area of responsibility.
- 6.3. Seek clarification, where areas of uncertainty or disagreement occur.
- 6.4. Inform all relevant personnel promptly of budget decisions.
- 6.5. Present proposals clearly, concisely, in an appropriate form, and emphasising benefits to store operation.

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- interpersonal skills to:
 - encourage team members to control costs
 - provide information to relevant personnel where potential occurs for budget under or overspend
 - negotiate budgets and provide information on budget decisions through clear and direct communication
 - ask questions to identify and confirm requirements

- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication
- time management skills to prepare, negotiate and complete budgets within set timeframes
- literacy and numeracy skills to:
 - write and present reports
 - compile and analyse budgetary figures

Required knowledge

- store policy and procedures in regard to:
 - financial management
 - resource utilisation
- store revenue
- capital and overhead costs
- interest rates
- pricing policies, including GST requirements
- cost of stock, materials and equipment
- staffing costs
- operational costs
- principles and techniques in:
 - interpersonal communication
 - monitoring resource utilisation and costs
 - analysing efficiency and effectiveness
 - cost-benefit analysis
 - differential analysis
 - risk analysis

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- consistently negotiates, develops and implements store budgets according to store policy and procedures
- monitors, analyses and reports on income and expenditure against budgets according to store policy and procedures
- manages and maintains accurate accounting systems according to store policy and procedures
- develops and maintains store policy and procedures in

regard to store sales budgets or targets.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- store or sample policy and procedures in regard to financial management
- an accounting system
- budgetary information
- a team involved in budget control.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- research project
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Store policy and procedures in regard to:

- financial management
- reporting mechanisms.

Information may include:

- resource utilisation
- capital and overhead costs
- interest rates
- stock, materials and equipment
- staffing levels
- operational costs.

Information may be obtained by:

- direct observation
- written reports
- numerical data.

Resources may include:

- people

- materials
 - equipment and technology
 - finances
 - time.
- Team members*** may include:
- full-time, part-time, casual or contract staff
 - people from a range of social, cultural and ethnic backgrounds
 - people with varying degrees of language and literacy levels.
- Communication*** may be:
- formal and informal
 - with individuals or groups
 - written, faxed, emailed or spoken.
- Relevant personnel*** may include:
- relevant managers
 - supervisor
 - team leader.
- Proposals*** may include:
- profitability
 - productivity
 - quality of service
 - environmental impact
 - working conditions
 - working relationships
 - team motivation
 - long-term goals
 - short-term goals.
- Record keeping systems*** may include:
- manual
 - computerised.
- Budget or target figures*** may encompass:
- sales
 - cash flow
 - net profit
 - payroll
 - staff expenditure
 - capital
 - maintenance
 - advertising and promotion.

Unit Sector(s)

Cross-Sector

Competency field

Finance

SIRXFIN201 Balance and secure point-of-sale terminal

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXFIN001A Balance point-of-sale terminal.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to balance and reconcile a register or terminal in a retail environment. It involves clearing the register, counting money, calculating non-cash transactions, and reconciling and recording takings.

The unit requires the application of store policy and procedures in undertaking those tasks.

Application of the Unit

This unit applies to frontline retail staff working under some supervision.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element

Performance Criteria

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- | | |
|--|---|
| 1. Balance and secure takings from register or terminal. | 1.1. Perform <i>register or terminal</i> balance at designated times according to <i>store policy and procedures</i> .
1.2. Separate cash float from takings prior to balancing procedure and secure according to store policy.
1.3. Supply change to register or terminal according to store policy.
1.4. Obtain and interpret register or terminal reading or print-out.
1.5. Secure cash and <i>non cash documents</i> according to store security policy and procedures. |
| 2. Reconcile takings. | 2.1. Count cash accurately.
2.2. Calculate non cash documents accurately.
2.3. Determine balance between register or terminal reading and sum of cash and non cash transactions.
2.4. Report discrepancies between register or terminal reading and sum of cash and non cash transactions to <i>relevant personnel</i> according to store policy.
2.5. Record store and individual department takings and file <i>records</i> according to store policy. |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- literacy and numeracy skills to:
 - balance the register or terminal
 - count cash
 - calculate non-cash transactions
 - calculate discrepancies between reported and actual takings
 - complete documentation

- interpret documentation
- report on takings
- planning and organising skills to complete tasks in a set timeframe
- technology skills to operate register or terminal

Required knowledge

- cash and non-cash handling procedures, including:
 - balancing point-of-sale terminal
 - calculating non-cash documents
 - change required and denominations of change
 - clearance of terminal and transference of tender
 - counting cash
 - credit and returns
 - credit cards
 - EFTPOS
 - gift vouchers
 - lay-by
 - maintenance of cash float
 - opening and closing point-of-sale terminal
 - recording takings
 - security of cash and non-cash transactions
- store policy and procedures in regard to:
 - cash float
 - operation of equipment used at register or terminal
 - register or terminal balance
 - security of cash and non-cash transactions

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- operates register or terminal equipment according to manufacturer instructions and store policy
- applies store policy and procedures in regard to handling cash and removing takings from register or terminal
- applies store policy and procedures in regard to cash float

- applies store policy and procedures in regard to reading registers and recording information
- processes documentation and records responsibly and according to store policy and procedures
- reconciles takings according to store policy and procedures.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail work environment
- relevant documentation, such as:
 - financial transaction dockets, slips and invoices
 - sample debit card and credit card vouchers
 - recording and tally sheets
 - store policy and procedure manuals in regard to register or terminal balance
- register or terminal and related equipment.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- role play
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXCCS201 Apply point-of-sale handling procedures
- SIRXRSK201 Minimise loss.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

- Register or terminal*** may be:
- cleared at intervals during or at close of trading
 - cleared by operator or specialist staff
 - electronic

- Store policy and procedures*** in regard to:
- manual.
 - cash handling
 - register or terminal balance
 - security.
- Non-cash documents*** may relate to:
- cash on delivery (COD)
 - cheques
 - credit cards
 - customer credit ratings
 - customer refunds
 - gift vouchers
 - hire-purchase
 - lay-by.
- Relevant personnel*** may include:
- manager
 - supervisor
 - team leader.
- Records*** may be:
- electronic
 - manual.

Unit Sector(s)

Cross-Sector

Competency Field

Finance

SIRXICT001A Operate retail technology

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to operate a variety of retail equipment. It involves identifying the correct equipment required for a given task, maintaining retail equipment, applying keyboard skills and operating data entry equipment.

Application of the Unit

This unit applies to frontline service personnel who operate and maintain a range of retail equipment, including point-of-sale systems, keyboards and data entry equipment, according to manufacturer instructions, design specifications, store policy and designated timeframes. This work is undertaken with some supervision and guidance.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Maintain retail equipment.	1.1. Identify purpose of <i>equipment</i> used in store or department. 1.2. Operate equipment, according to design specifications and <i>safety requirements</i> . 1.3. Identify equipment faults and report to <i>relevant personnel</i> . 1.4. Identify and apply maintenance program for retail equipment according to <i>store policy and procedures</i> .
2. Apply keyboard skills.	2.1. Operate keyboard using typing techniques within designated speed and accuracy requirements. 2.2. Enter and edit information accurately.
3. Operate data entry equipment.	3.1. Enter data using relevant equipment, according to store policy and procedures. 3.2. Operate price marking equipment, according to manufacturer instructions and store policy. 3.3. Enter data accurately and within designated time limits.

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- planning and organising skills to complete tasks in set timeframe
- problem solving skills to deal with different types of transactions
- literacy and numeracy skills to:
 - read store procedures for operating equipment
 - enter data
 - perform point-of-sale transactions
 - follow common fault-finding procedures

Required knowledge

- store policy and procedures in regard to:
 - the operation and maintenance of store retail equipment
 - reporting problems and faults
- relevant legislation and statutory requirements in regard to operating retail technology, including Work Health and Safety (WHS) requirements
- relevant industry codes of practice
- purpose and impact of using electronic technology
- licensing requirements for carrying and moving merchandise (if applicable)

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- operates a range of store retail equipment according to store policy and procedures and industry codes of practice
- operates and maintains a range of store retail equipment according to manufacturer instructions and design specifications
- applies store maintenance program and reports faults and problems
- consistently applies safe working practices in the operation and maintenance of store retail equipment according to OHS legislation and codes of practice
- reads and interprets operation manuals to solve routine faults and errors and maintains and uses equipment effectively
- uses keyboard skills to enter and edit data accurately
- completes tasks in set timeframe.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated work environment
- relevant documentation, such as:
 - store policy and procedure manuals
 - manufacturer instructions and operation manuals
- a range of store retail equipment.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a role play
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Equipment may include:

- point-of-sale terminals
- electronic bar coding equipment for price labelling and stocktaking
- portable data entry
- printers
- EFTPOS terminals
- electronic ordering equipment
- wrapping and packing equipment
- equipment for carrying or moving merchandise
- equipment for storage of merchandise, including refrigerators
- weighing machines
- thermometers
- security tag systems
- trolley return equipment
- computers
- scanners
- numerical keyboard equipment, including calculators.
- hazard identification (e.g. workplace inspections)
- emergency, fire and accident procedures
- personal safety procedures
- stress management
- procedures for the use of personal protective clothing and equipment

Safety requirements may include:

- Relevant personnel** may include:
- reporting incidents and accidents in the workplace.
 - supervisor
 - team leader
 - manager.
- Store policy and procedures** in regard to:
- store administration
 - clerical systems
 - operating and maintaining retail equipment
 - Work Health and Safety (WHS).

Unit Sector(s)

Cross-Sector

Competency field

Computer Operations and ICT Management

SIRXICT303 Operate retail information technology systems

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXICT003A Operate retail information technology systems.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to operate information technology systems, resolve system faults, perform point-of-sale system transactions, and safely and securely store electronic information according to store policy and procedures and relevant legislation. It involves understanding the operation of hardware and software in use, editing and updating information, and solving problems in relation to hardware and software.

Application of the Unit

This unit applies to managerial or supervisory staff with a responsibility to operate store information technology systems in a retail environment.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element

Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- | | |
|--|---|
| 1. Use store information technology system. | <p>1.1. Demonstrate operation of store <i>information technology system</i> to <i>staff members</i> according to <i>store policy and procedures</i>, as required.</p> <p>1.2. Identify and operate <i>hardware</i> and <i>software</i> according to manufacturer instructions and store policy and procedures.</p> <p>1.3. Interpret the <i>application and uses</i> of information technology systems available.</p> <p>1.4. Transmit data according to electronic data interchange (EDI) procedures as required.</p> <p>1.5. Use keyboard skills to enter <i>information</i> accurately and as required by store policy.</p> <p>1.6. Regularly perform <i>back-up procedures</i> according to store policy.</p> |
| 2. Edit and update information. | <p>2.1. Identify information to be edited and updated according to store procedures.</p> <p>2.2. Edit and update information on system according to store policy and procedures.</p> <p>2.3. Identify and enter price changes into store system as required.</p> <p>2.4. Ensure shelf data price and computer records match according to store policy.</p> |
| 3. Solve information technology system problems. | <p>3.1. Identify equipment, hardware and software <i>faults</i> and rectify where possible or seek expert assistance without delay.</p> <p>3.2. Monitor and implement maintenance program for hardware and software systems according to manufacturer specifications and store procedures.</p> <p>3.3. Handle routine problems using appropriate <i>problem-solving techniques</i> and refer to <i>relevant personnel</i> as required.</p> <p>3.4. Evaluate and resolve problems arising at point of sale according to store procedures and <i>relevant legislation</i>.</p> <p>3.5. Provide assistance positively and actively to staff as problems arise.</p> |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:
 - ask questions to identify and confirm requirements
 - convey knowledge of store technology system to other staff members
 - provide assistance to staff through clear and direct communication
 - refer problems to appropriate personnel
 - share information
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
- literacy and numeracy skills to process and record information
- technology skills to:
 - apply and use hardware and software
 - use store technology information systems

Required knowledge

- manufacturer specifications in regard to operation of hardware and software
- problem-solving techniques
- relevant industry codes of practice
- relevant legislation and statutory requirements, including:
 - consumer law
 - credit procedures
- software licensing specifications
- store policy and procedures in regard to use and operation of store information technology systems, including:
 - efficient and sustainable use of resources
 - work health and safety (WHS) and ergonomic requirements
 - operation of equipment
 - solutions to problems and breakdowns
 - use and maintenance of hardware and software systems
- store products and services range, including pricing structure

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- applies store policy and procedures in regard to information technology systems, including:
 - resolving system faults
 - using and applying store credit and EFTPOS
 - reviewing and entering information on store system
- follows requirements of relevant legislation and statutory requirements, including Australian consumer law and credit procedures.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail work environment
- hardware and software instruction manuals
- information technology system
- relevant documentation, such as:
 - store or sample policy and procedures on management of information technology systems
 - legislation and statutory requirements
 - WHS requirements
 - industry codes of practice.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- role play
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

- Information technology system** used may be:
- centrally based
 - store-based
 - networked.
- Staff members** may be:
- full-time, part-time or casual
 - under contract
 - people with varying degrees of language and literacy
 - people from a range of cultural, social and ethnic backgrounds
 - people with a range of responsibilities and job descriptions.
- Store policy and procedures** in regard to:
- efficient and sustainable use of resources
 - information technology systems
 - WHS
 - processing sales orders.
- Hardware** may include:
- bar coding
 - hand-held pricing equipment
 - personal computers or terminals (stand-alone or networked)
 - point-of-sale terminals
 - scanning equipment.
- Software** may include:
- databases
 - EDI
 - financial
 - spreadsheets
 - word processing.
- Application and uses** may include:
- arrangement of credit for customer via a third party
 - credit checks for granting of credit or loans
 - customer records
 - electronic cataloguing
 - financial management
 - individual, department or item sales performance analysis
 - inventory control
 - point-of-sale operations, including:
 - credit cards
 - EFTPOS
 - loyalty cards
 - online sales
 - smart cards
 - pricing and price changes
 - staff payroll, from staff log-in and log-out information
 - staff rosters
 - stock transfers and delivery
 - use of internet facilities

- Information** may include:
- use of multimedia.
 - customer details or records, including:
 - names
 - contact details
 - consumer information or profiles
 - orders
 - price changes
 - staffing information
 - stock records
 - stock transfers.
- Back-up procedures** may include:
- CD
 - digital tape
 - DVD
 - external hard drive
 - off-site data storage
 - zip disc.
- Faults** may include:
- hardware faults or breakdowns
 - point-of-sale functionality problems, such as:
 - cheque clearances
 - credit facilities
 - EFTPOS
 - pricing variations
 - software functionality problems
 - staff error or lack of training.
- Problem-solving techniques** may include:
- following routine procedures or manufacturer recommendations
 - lateral thinking
 - referral to:
 - operator
 - manager
 - specialist.
- Relevant personnel** may include:
- manager
 - supervisor
 - team leader
 - technical specialist.
- Relevant legislation** may include:
- consumer law
 - credit procedures
 - WHS.

Unit Sector(s)

Cross-Sector

Competency Field

Computer Operations and ICT Management

SIRXINV001A Perform stock control procedures

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to handle stock in a retail environment. It involves receiving and processing incoming goods, rotating stock and dispatching goods.

Application of the Unit

This unit applies to team members who handle and move stock, to ensure efficient stock control within the retail environment. Team members are required to receive and process incoming goods, dispatch outgoing goods, rotate stock and maintain stock levels, assist with stocktaking, and report problems or discrepancies in stock to relevant personnel according to store policy and relevant legislation, whilst using safe working practices.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Receive and process incoming goods.	<p>1.1. Maintain cleanliness and orderliness in receiving bay according to <i>store policy and procedures</i>.</p> <p>1.2. Unpack goods using correct <i>handling techniques</i> and <i>equipment</i>, according to store policy.</p> <p>1.3. Remove and promptly dispose of packing materials, according to store policy and relevant <i>legislative requirements</i>.</p> <p>1.4. Check incoming stock and validate against purchase orders and delivery documentation, according to store policy and relevant legislative requirements.</p> <p>1.5. Inspect items received for damage, quality, use by dates, breakage or discrepancies and record, according to store policy.</p> <p>1.6. Record stock levels on store <i>stock systems</i>, according to store policy.</p> <p>1.7. Rotate and store stock, according to the first in first out (FIFO) principle.</p> <p>1.8. Dispatch stock to appropriate area or department.</p> <p>1.9. Apply stock price and code labels when required according to store policy.</p>
2. Rotate stock.	<p>2.1. Carry out stock rotation procedures, according to store routine and policy.</p> <p>2.2. Perform store code checking and reporting procedures, including recording of waste and markdowns.</p> <p>2.3. Place merchandise to achieve a balanced, fully stocked display appearance and promote sales.</p> <p>2.4. Place excess stock in storage or dispose of, according to store policy and legislative requirements.</p> <p>2.5. Maintain safe lifting, shifting and carrying techniques according to store Work Health and Safety (WHS) policy and legislative requirements.</p>

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- literacy and numeracy skills to:
 - follow set routines and procedures
 - use electronic labelling and ticketing equipment
 - stock records and delivery documentation
 - report problems

Required knowledge

- store policy and procedures in regard to:
 - stock control
 - store labelling policy
 - product quality standards
 - correct unpacking of goods
 - out-of-date, missing or damaged stock
 - equipment used
 - stock location
 - waste disposal
 - methods of storage
 - delivery documentation
 - stock record documentation
 - dispatch documentation
 - reporting faults and problems
- relevant legislation and statutory requirements in regard to stock control, including WHS
- relevant industry codes of practice

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- consistently applies store policy and procedures, industry codes of practice, relevant legislation and statutory requirements in regard to stock control
- consistently applies safe working practices in the manual handling and moving of stock according to

WHS legislation and store policy

- interprets and applies manufacturer instructions with regard to handling stock and using relevant equipment
- receives and processes incoming goods and dispatches outgoing goods according to store policy and procedures
- rotates stock and performs out-of-code checking and reporting according to store policy and procedures
- interprets and processes information accurately and responsibly.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant equipment, including:
 - stock moving equipment
 - manual and electronic labelling and ticketing equipment
- computers and stock recording equipment
- relevant documentation, such as:
 - invoices, packing slips, dispatch documents and order forms
 - recording and tally sheets
 - store policy and procedures manuals
 - WHS regulations
 - relevant legislation and statutory requirements
 - industry codes of practice.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXCCS001A Apply point-of-sale handling procedures
- SIRXRSK001A Minimise theft
- SIRXCCS002A Interact with customers

- SIRXFIN001A Balance point-of-sale terminal.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Store policy and procedures may relate to:

- stock control
- reception and dispatch
- WHS
- food safety.

Handling techniques may vary according to:

- stock characteristics
- industry codes of practice
- legislative requirements.

Equipment may include:

- electronic bar coding equipment
- weighing machines
- thermometers
- trolley return equipment
- portable data entry
- cutting equipment
- protective clothing.

Legislative requirements may include:

- WHS
- hazardous substances and dangerous goods
- labelling of workplace substances
- waste removal and environmental protection
- transport, storage and handling of goods.

Stock systems may be:

- manual
- electronic.

Unit Sector(s)

Cross-Sector

Competency field

Inventory

SIRXINV002A Maintain and order stock

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to maintain and order stock in a retail environment. It involves monitoring receipt and dispatch of goods, maintaining stock records, coordinating stocktake, identifying stock losses, processing orders and following up on orders.

Application of the Unit

This unit applies to retail staff who are responsible for monitoring and coordinating stock levels, storage, distribution and reorder cycles. It includes rostering staff, organising and coordinating stocktakes, maintaining accurate records and routinely reporting on inventory status to relevant personnel according to store policy and procedures.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Monitor receipt and dispatch of goods.	<p>1.1. Delegate responsibility for receipt and dispatch of goods to <i>appropriate staff</i>.</p> <p>1.2. Implement store procedures in regard to receipt, dispatch and secure storage of goods.</p> <p>1.3. Observe <i>staff</i> functions to ensure store procedures are followed and documentation is completed correctly.</p> <p>1.4. Implement store procedures to ensure goods inspected for quantity and quality on receipt.</p> <p>1.5. Act upon variations to quantity and quality of delivered goods, according to <i>store policy and procedures</i>.</p> <p>1.6. Supervise safe <i>handling and storage of goods</i>, according to store policy.</p>
2. Maintain stock records.	<p>2.1. Monitor and maintain stock levels at required levels.</p> <p>2.2. Maintain, monitor and adjust stock reorder cycles as required.</p> <p>2.3. Inform team members of their individual responsibilities in regard to recording of stock.</p> <p>2.4. Maintain stock storage and movement <i>records</i>, according to store policy.</p> <p>2.5. Record stock discrepancies and follow procedures according to store policy.</p> <p>2.6. Monitor stock performance and identify and <i>report</i> fast and slow selling items according to store policy.</p>
3. Coordinate stocktake or cyclical count.	<p>3.1. Interpret policy and procedures in regard to <i>stocktaking</i> and cyclical counts and explain to team members.</p> <p>3.2. <i>Roster</i> staff, according to allocated budget and time constraints.</p> <p>3.3. Allocate stocktaking tasks to individual team members.</p> <p>3.4. Provide team members with clear directions for the performance of each task.</p> <p>3.5. Allocate team members to ensure effective use of staff resources to complete task.</p> <p>3.6. Produce accurate reports on stocktake data, including discrepancies, for management.</p>

- | | |
|---------------------------|---|
| 4. Identify stock losses. | 4.1. Identify, record and assess losses against potential loss forecast on a regular basis. |
| | 4.2. Identify avoidable losses and establish reasons. |
| | 4.3. Recommend and implement possible solutions. |
| 5. Process orders. | 5.1. Process and raise orders for stock as requested, according to store policy and procedures. |
| | 5.2. Maintain ordering and recording system . |
| | 5.3. Ensure availability of sample range, according to buying plan. |
| | 5.4. Order pricing materials as required. |
| | 5.5. Record negotiated purchase and supply agreements and file for retrieval. |
| 6. Follow up orders. | 6.1. Monitor delivery process to meet agreed deadlines. |
| | 6.2. Handle routine supply problems or refer to management as required by store policy. |
| | 6.3. Maintain ongoing liaison with buyers, store or departments, warehouse and suppliers to ensure continuity of supply. |
| | 6.4. Distribute stock, according to store or department allocation. |

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- technical skills to:
 - use store stocktaking systems
 - use electronic recording equipment
- interpersonal skills to:
 - inform team members of their responsibilities and give instructions
 - explain policies and procedures to staff
 - allocate tasks and provide directions for performance of tasks
 - liaise with buyers, store and departments, warehouse and suppliers through clear and direct communication
 - ask questions to identify and confirm requirements
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
- management skills to coordinate stock takes
- negotiation skills to handle supply problems
- literacy and numeracy skills to:
 - prepare and present stock control reports and documentation

- process orders
- maintain delivery and supply records
- maintain stock distribution records
- maintain stock ordering and recording systems

Required knowledge

- store policy and procedures in regard to:
 - stock control
 - store merchandising system
 - current and future stock levels
 - bar codes, labels and price tags
 - store stock recording system
 - stock replenishment and reorder procedures
 - inter- and intra-store and department transfers
 - reporting of stock discrepancies and damage
 - identifying and recording stock losses
 - identifying and recording discrepancies
 - existing suppliers
 - quality control procedures and requirements
 - receipt and dispatch of goods, including inspection for quality and quantity
- relevant licensing requirements for moving stock mechanically
- relevant legislation and statutory requirements
- relevant industry codes of practice
- relevant Work Health and Safety (WHS) legislation and codes of practice

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment Evidence of the following is essential:

and evidence required to demonstrate competency in this unit

- consistently implements and monitors store policy and procedures regarding receipt, dispatch and secure storage of goods
- regularly monitors staff implementation of store procedures and documentation in regard to receipt, dispatch and secure storage of goods
- monitors stock levels, storage, movement and reorder cycles on a regular basis.
- organises and coordinates stocktake according to store

policy and procedures

- consistently raises and processes stock orders and maintains record system according to store policy and procedures
- monitors delivery processes and distributes stock to ensure continuity of supply.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
 - store policy and procedures for receipt and dispatch of goods
 - store procedures for stocktake
 - WHS legislation and codes of practice
 - industry codes of practice
 - legislation and statutory requirements
 - store merchandising and marketing policy and procedures
 - inter- and intra-store and department transfer procedures
 - store quality control procedures and requirements.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Appropriate staff may include:

- frontline staff
- relevant managers

- Staff** may include:
- supervisor
 - team leader
 - specialist staff.
 - full-time, part-time, casual or contract staff
 - people from a range of social, cultural and ethnic backgrounds
 - people with varying degrees of language and literacy levels.
- Store policy and procedures** in regard to:
- stock control
 - stock control system
 - recording procedures
 - procedures for investigating discrepancies
 - store merchandise and marketing
 - pricing, labelling and packaging requirements
 - quality control policy and procedures.
- Handling and storage of goods** may vary according to:
- stock characteristics
 - industry codes of practice.
- Records** may be:
- manual
 - digital.
- Reports** for management may include:
- financial reports
 - business documents
 - informal reports
 - stocktake reports.
- Stocktaking** may be:
- cyclical
 - compliance driven.
- Roster** may include:
- varying levels of staff training
 - staffing levels
 - routine or busy trading conditions
 - full-time, part-time or casual staff
 - range of staff responsibilities.
- Ordering and recording system** may be:
- manual
 - digital.
- Suppliers** may include:
- existing contacts
 - new contacts
 - local suppliers
 - overseas supplies.

Unit Sector(s)

Cross-Sector

Competency field

Inventory

SIRXINV004A Buy merchandise

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to buy merchandise in a retail environment. It involves analysing the market, planning the product range, establishing supplier relationships, negotiating supply of goods, introducing the product range, maximising profit and rationalising stock.

Application of the Unit

Application of the unit

This unit requires the consistent application of store policy and legislative requirements in regard to market analysis, planning merchandise and service ranges, procurement and rationalisation of stock, maintenance of supplier relations, quality control and staff merchandise training. The team member is required to recognise known and unknown loss and how it affects buying and ordering patterns, and to interpret and apply market trends to the store situation to create opportunities to improve sales and service while maximising profits.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units

Nil

Prerequisite units Nil

Employability Skills Information

Employability skills The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Analyse market.	<p>1.1 Identify and analyse <i>store merchandise and marketing policy and procedures</i>.</p> <p>1.2 Monitor <i>customer requirements</i> formally and informally in order to evaluate market trends and customer needs.</p> <p>1.3 Research new products and services.</p> <p>1.4 Identify, evaluate, implement and review opportunities to improve sales.</p> <p>1.5 Monitor <i>merchandise range</i> to identify the demand for individual items and seasonal variations.</p> <p>1.6 Monitor market competition.</p>

ELEMENT	PERFORMANCE CRITERIA
2 Analyse factors affecting stock levels and range requirements.	2.1 Apply mathematical calculations to measure analyse and report on existing and potential stock loss and dissipation and its <i>impact on business operations</i> . 2.2 Analyse store or department sales figures to determine contribution rates of product lines. 2.3 Determine store or department space requirements and brand product mix according to store policy. 2.4 Determine future directions for merchandise ranges according to store policy.
3 Plan merchandise ranges.	3.1 Develop and implement buying plan according to outcomes of analysis and store policy. 3.2 Determine future directions for merchandise ranges according to store policy. 3.3 Liaise with <i>relevant personnel</i> to coordinate promotional and marketing activities. 3.4 Analyse store or department sales figures to determine contribution rates of product lines. 3.5 Determine investment levels with reference to previous years' sales figures, predicted demand and projected gross profit. 3.6 Identify and act upon contribution improvement opportunities. 3.7 Determine store or department space requirements and brand product mix according to store policy. 3.8 Determine stock levels according to peak seasons, special events and supplier lead time. 3.9 Analyse, evaluate and amend merchandise range and sources of supply according to management, staff and customer <i>feedback</i> .
4 Establish supplier relations.	4.1 Develop cooperative relationships with supplier representatives according to store policy. 4.2 Continuously review existing suppliers in regard to quality, profitability, service and delivery status. 4.3 Identify new suppliers and delete existing suppliers according to <i>performance indicators</i> .

ELEMENT	PERFORMANCE CRITERIA
5 Negotiate supply of goods.	<p>5.1 <i>Negotiate</i> and implement arrangements with suppliers according to store policy and procedures, and communicate to relevant personnel.</p> <p>5.2 Authorise special <i>pricing arrangements</i> and customer payment agreements and communicate to relevant staff and management personnel according to store policy.</p> <p>5.3 Monitor records of suppliers and stock for accuracy and legibility and take appropriate action where necessary.</p> <p>5.4 Identify <i>market factors</i> affecting supply and communicate to relevant personnel.</p> <p>5.5 Convey complete and accurate records of negotiations and agreements to relevant personnel within designated timelines.</p> <p>5.6 Take immediate corrective action where potential or actual problems with supply are indicated.</p> <p>5.7 Identify and develop new suppliers to maintain and improve sales and service delivery.</p> <p>5.8 Analyse, evaluate and amend stock range and source of supply according to management, staff and customer feedback.</p>
6 Monitor quality control.	<p>6.1 Establish merchandise quality standards with suppliers according to <i>legal requirements</i>, customer requirements and store policy.</p> <p>6.2 Monitor and ensure quality of merchandise during supply, manufacture and delivery processes.</p> <p>6.3 Record and analyse stock return figures against target figure.</p>
7 Introduce product ranges.	<p>7.1 Inform relevant personnel of new product ranges and advise on preferred location of merchandise.</p> <p>7.2 Implement <i>staff training</i> in product knowledge to introduce product range.</p> <p>7.3 Demonstrate or display new ranges to <i>staff</i> according to store merchandising plan.</p>

ELEMENT	PERFORMANCE CRITERIA
8 Maximise profit.	<p>8.1 Calculate or estimate individual product range contributions against budget and targets.</p> <p>8.2 Develop and implement product range assessment checks against budget and targets.</p> <p>8.3 Calculate or estimate overall selling space contributions according to store merchandising plan.</p> <p>8.4 Maximise profit margins in negotiations with suppliers.</p> <p>8.5 Determine store pricing policies according to stated net profit margin in store merchandising plan and consumer law.</p> <p>8.6 Negotiate specifications for <i>terms of trade</i>.</p>
9 Rationalise stock.	<p>9.1 Review and update stock range at regular intervals.</p> <p>9.2 Identify stock lines to be <i>deleted</i> and take action to minimise adverse effect on profit.</p> <p>9.3 <i>Consolidate stock</i> as required to maximise sales potential.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- evaluating and analysing:
 - market trends and projections
 - sales figures and investment levels
 - space requirements
- negotiation skills
 - interpersonal communication skills to:
 - liaise with relevant personnel
 - establish supplier relationships, negotiate supply of goods
 - provide information and training on product range
 - provide feedback and coaching through clear and direct communication

REQUIRED SKILLS AND KNOWLEDGE

- ask questions to identify and confirm requirements
- give instructions
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication
- group presentation skills
- report writing
- using and applying technology, including electronic data interchange
- literacy and numeracy skills in relation to:
 - developing pricing policies
 - calculating and estimating product range contributions
 - calculating the cost of stock loss and dissipation
 - analysing stock figures.

The following knowledge must be assessed as part of this unit:

- store policy and procedures in regard to:
 - marketing
 - buying
 - profit margins
 - quality control
 - stock inventory levels: current and future
 - stock location and allocated areas
- staff product knowledge training
- industry and store information, including:
 - market needs
 - range of merchandise available
 - market competition
 - existing and possible new suppliers
 - channels of distribution
- relevant legislation and statutory requirements
- relevant industry codes of practice
 - pricing procedures, including GST requirements.

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- consistently applies store policy and procedures, industry codes of practice, statutory requirements and regulations in regard to buying, merchandising and marketing practices
- applies market analysis, planning, procurement and rationalisation of stock and merchandise and service ranges, maintenance of supplier relations and quality control
- interprets market trends and applies these to the store situation to create opportunities to improve sales and services, while maximising profits
- analyses market and plans the introduction of a product and service range
- identifies suppliers, negotiates supply of goods, rationalises stock and monitors quality control
- trains and communicates information to and from staff or team members in regard to stock and merchandise and service range.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant information and documentation, including:
 - store policy and procedures
 - legislation and statutory requirements
 - industry codes of practice
 - merchandise and supplier data.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback

EVIDENCE GUIDE

- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Store merchandise and marketing policies may include:

- store culture
- current market position
- target market.

Customer requirements may be monitored by:

- questionnaires
- surveys
- observation.

Merchandise range may include:

- existing stock
- new stock.

RANGE STATEMENT

Impact on business operations may include:

- buying
- ordering patterns
- planning
- budgeting.

Relevant personnel may include:

- frontline staff
- relevant managers
- supervisor
- team leader
- specialist staff.

Feedback may be sought and given:

- verbally
- in writing
- in groups
- individually.

Performance indicators may include:

- price
- quality
- performance
- supply reliability
- merchandise range.

Negotiation process may include:

- face-to-face
- correspondence
- meetings
- telephone or electronic media.

Pricing arrangements may include:

- cash on delivery (COD)
- cheque
- credit card
- invoice
- GST.

Market factors may include:

- fashion trends

RANGE STATEMENT

- product availability
- sales performance.

Legal requirements may include:

- sale of second-hand goods
- Trade Practices and Fair Trading Acts
- licence, patent or copyright arrangements
- pricing procedures, including GST requirements.

Staff training may include:

- on-the-job
- off-the-job
- one-on-one coaching
- any combination of the above.

Staff may include:

- full-time, part-time, casual or contract staff
- people from a range of social, cultural and ethnic backgrounds
- people with varying degrees of language and literacy levels.

Terms of trade may include:

- special buys
- payment terms
- promotional deals with supplier.

Stock lines may be *deleted* due to:

- changes in store policy and culture
- sales performance
- customer requirements
- fashion trends
- product availability
- problems with supply.

Methods to *consolidate stock* may include:

- movement of stock between departments or stores.

Unit Sector(s)

Sector Cross-Sector

Competency field

Competency field Inventory

SIRXMER004A Manage merchandise and store presentation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit describes the performance outcomes, skills and knowledge required to manage merchandise and store presentation.

Application of the Unit

Application of the unit This unit requires the team member to apply knowledge of store merchandising to plan and manage store advertising and promotions, manage store pricing policies and housekeeping. It includes interpretation of and compliance with store layout and visual merchandising policies, developing and implementing procedures to manage merchandise pricing, and managing all aspects of store housekeeping, including contingency procedures. This role applies to frontline retail managers.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Manage store merchandising.	<p>1.1 Ensure layout and presentation support market position and promote customer flow according to store <i>visual merchandising policies and plans</i>.</p> <p>1.2 Develop and implement layout assessment checks.</p> <p>1.3 Define standards for visual presentations and displays and clearly communicate to all staff</p> <p>1.4 Consult floor staff to assess customer response to space allocations.</p>
2 Plan and manage store advertising and promotions.	<p>2.1 Manage and implement store policies and procedures, in regard to store <i>promotional activities</i>.</p> <p>2.2 Organise activities in line with anticipated or researched customer requirements.</p> <p>2.3 Manage <i>promotions</i> in order to achieve maximum customer impact.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4 Negotiate arrangements with suppliers in regard to special promotional activities.
	2.5 Coordinate store activities to complement shopping centre or retail complex promotions.
	2.6 Develop and implement assessment checks to measure effectiveness of promotions, including layout, visual impact and customer response.
	2.7 Document and report on promotional activities.
3 Manage store pricing policies.	3.1 Maintain store pricing according to <i>organisation pricing policies and procedures</i> in regard to pricing.
	3.2 Maintain accurate information on pricing trends and changes and communicate to relevant staff.
	3.3 Develop and implement procedures for pricing according to store policies and <i>legislative requirements</i> .
4 Manage housekeeping.	4.1 Develop and implement store policies and procedures in regard to <i>store housekeeping and maintenance</i> .
	4.2 Develop and manage rosters or schedules, ensuring store housekeeping standards are monitored and maintained.
	4.3 Initiate <i>contingency plan</i> in the event of merchandise or store presentation problems.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- providing feedback on performance
- interpersonal communication skills to:
 - communicate store standards and expectations to staff
 - consult floor staff
 - negotiate arrangements with suppliers, through clear and direct communication
 - ask questions to identify and confirm requirements

REQUIRED SKILLS AND KNOWLEDGE

- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication
- roster development
- report writing
- literacy skills in regard to:
 - researching, analysing and interpreting a broad range of written material
 - preparing rosters
 - preparing reports
 - documenting results

The following knowledge must be assessed as part of this unit:

- store policies and procedures, in regard to:
 - layout and presentation
 - advertising and promotions
 - pricing or marking down of goods, including risk assessment
 - housekeeping for premises, fittings, fixtures and equipment
 - store merchandise and service range
 - store merchandising plan
 - range and availability of new products and services
 - customer demand and market trends
 - product quality standards
- OHS legislation and codes of practice
- relevant legislation and statutory requirements
- relevant industry codes of practice
- pricing procedures, including GST requirements
- principles and techniques in:
 - visual merchandising
 - project management

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- collaboratively plans layout and presentation of merchandise according to store policies and procedures
- assesses effectiveness of layout and presentation according to sales targets or predetermined objectives
- collaboratively plans, coordinates and implements advertising and promotions activities according to store policies and procedures
- assesses and reports on effectiveness of advertising and promotions to staff and management according to store policies and procedures
- collaboratively plans, coordinates and implements pricing activities according to store policies and procedures
- collaboratively plans, coordinates and implements housekeeping activities according to store policies and procedures and OHS legislation, regulations and codes of practice.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
 - store policy and procedures manuals
 - store merchandising plan
 - legislation and statutory requirements
 - OHS legislation, regulations and codes of practice
- a work team.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge.

Holistic assessment with other units relevant to the

EVIDENCE GUIDE

industry sector, workplace and job role is recommended.

Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Visual merchandising policies and plans may include:

- target market
- market research
- store image
- store layout and space availability
- seasonal lines
- pricing policy.

Promotional activities may involve:

- external and in-store activities
- corporate or locally based activities
- dealing with advertising agencies and consultants.

Promotions may include:

- advertising
- catalogues
- newspapers
- posters

RANGE STATEMENT

Organisation pricing policies and procedures may include:

- radio or TV
- suppliers
- internet
- website.
- marking down of slow moving stock
- soiled or damaged goods
- goods close to use-by date
- end of season stock
- pricing policies, including GST requirements.

Legislative requirements may include:

- Trade Practices and Fair Trading Acts
- consumer law.

Store housekeeping and maintenance may include:

- store premises
- fittings
- fixtures
- equipment.

Contingency plan may include:

- major spillages
- flood, storm or cyclone
- breakages
- blackout
- break-in.

Unit Sector(s)

Sector

Cross-Sector

Competency field

Competency field

Merchandising

SIRXMER201 Merchandise products

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXMER001A Merchandise products.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to merchandise products within a retail store. It involves the consistent application of store policies and procedures in regard to displaying, merchandising, ticketing, labelling, pricing and storing stock. It also includes the application of correct manual handling, storage and display techniques according to stock characteristics, industry codes of practice, and relevant legislation.

Application of the Unit

This unit applies to frontline retail personnel.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Place and arrange merchandise.	<p>1.1.Unpack <i>merchandise</i> according to <i>store policy and procedures</i> and <i>legislative requirements</i>.</p> <p>1.2.Place merchandise on floor, fixtures and shelves in determined locations according to work health and safety (WHS) legislative requirements.</p> <p>1.3.<i>Display</i> merchandise to achieve a balanced, fully-stocked appearance and promote sales.</p> <p>1.4.Identify damaged, soiled or out-of-date stock and take corrective action as required according to store procedures.</p> <p>1.5.Place stock range in line with fixtures, ticketing, prices and bar codes.</p> <p>1.6.Rotate stock according to stock requirements and store procedure.</p> <p>1.7.Ensure stock presentation conforms to special <i>handling techniques</i> and other <i>safety requirements</i>.</p>
2. Prepare and apply labels and tickets.	<p>2.1.Prepare <i>labels and tickets</i> for window, wall or floor displays according to store policy.</p> <p>2.2.Prepare tickets using electronic equipment or neatly by hand according to design specifications and store procedures.</p> <p>2.3.Identify soiled, damaged, illegible or incorrect labels and tickets and take corrective action according to store procedures.</p> <p>2.4.Use, maintain and store electronic ticketing and labelling equipment according to manufacturer's instructions and store procedures.</p> <p>2.5.Place labels and tickets visibly and correctly on merchandise.</p> <p>2.6.Replace labels and tickets according to store policy.</p>
3. Maintain displays.	<p>3.1.Reset or dismantle unsuitable or out-of-date displays and <i>special promotion areas</i> as directed.</p> <p>3.2.Assist supervisor in selection of merchandise for display.</p> <p>3.3.Arrange and face up merchandise as directed and according to layout specifications and load-bearing capacity of fixtures.</p> <p>3.4.Maintain correct pricing and information on merchandise according to store procedures, industry codes of practice and</p>

- legislative requirements.
- 3.5. Identify optimum stock levels and replenish stock according to store policy.
- 3.6. Remove excess packaging and maintain display areas in a clean and tidy condition.
4. Protect merchandise.
- 4.1. Identify and apply correct handling, storage and display techniques according to stock characteristics and legislative requirements.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- literacy and numeracy skills to:
 - prepare machine or manual labels and tickets
 - read and interpret store procedures and guidelines
 - read and interpret manufacturer instructions
- self-management skills to complete tasks in a set timeframe
- technology skills to operate and maintain manual and electronic labelling and ticketing equipment

Required knowledge

- store policies and procedures in regard to:
 - availability and use of display materials
 - correct storage of stock
 - correct storage procedures for labelling and ticketing equipment and materials
 - location of display areas
 - merchandise range
 - merchandising, ticketing and pricing of stock
 - scheduling for building or rotating displays
 - stock replenishment
 - stock rotation
 - store promotional themes, including advertising, catalogues and special offers
- correct manual handling techniques for protection of self and merchandise
- principles of display
- elements and principles of design and trends in retail design
- relevant WHS regulations, including:
 - manual handling
 - hygiene and sanitation

- hazardous substances
- labelling of workplace substances
- relevant legislation and statutory requirements relating to merchandising product
- pricing procedures, including inclusion and exclusion of GST
- relevant industry codes of practice relating to merchandising product

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- applies store policies and procedures and legislative requirements in regard to displaying, merchandising, ticketing, pricing and storing stock
- displays merchandise on floor, fixtures, shelves and display areas, in determined locations, according to special manual handling techniques and other safety requirements
- prepares display labels and price tickets for merchandise with regard to store policies and procedures
- operates, maintains and stores a range of ticketing equipment according to:
 - store policy and procedures
 - industry codes of practice
 - manufacturer instructions and design specifications
- identifies damaged, soiled or out-of-date stock and takes corrective action as required by store procedures and legislative requirements
- maintains display areas and replenishes stock as required according to store procedures and legislative requirements
- performs correct manual handling, storage and display techniques.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail work environment
- a range of ticketing and pricing equipment
- merchandise for display
- display materials and props

- cleaning materials
- relevant documentation, such as:
 - store policy and procedure manuals on housekeeping, merchandising and WHS
 - manufacturer instructions and operation manuals for electronic ticketing equipment
 - relevant legislation and industry codes of practice.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXSLS201 Sell products and services
- SIRXSLS002A Advise on products and services.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

Merchandise may be characterised by:

- type
- brand
- size
- customer needs
- colour
- price.
- merchandising of stock
- preparing and displaying labels and tickets
- maintaining displays.
- pricing requirements, including GST requirements

Store policy and procedures in regard to:

Legislative

- requirements** may include:
- industry codes of practice
 - discounted items
 - Australian Consumer law.
- Display** may include:
- setting new displays
 - maintaining existing displays.
- Handling techniques** may vary according to:
- stock characteristics
 - store policy
 - legislative requirements
 - industry codes of practice.
- Safety requirements** may relate to:
- transport, storage and handling of goods
 - hazardous substances
 - labelling of workplace substances.
- Preparation of **labels and tickets** may involve:
- pricing gun
 - shelf tickets
 - shelf talkers
 - written labels
 - swing ticketing
 - bar coding
 - price boards
 - header boards.
- Special promotion areas** may be:
- permanent or temporary
 - interior or exterior
 - publicly accessible
 - windows
 - shelves
 - wall fixtures
 - on floor.

Unit Sector(s)

Cross-Sector

Competency Field

Merchandising

SIRXMER202 Plan, create and maintain displays

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXMER005A Create a display.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to identify requirements for displays, develop display ideas, obtain approval from relevant personnel, and plan and build displays. It also covers maintaining displays to meet the requirements of the product, the audience and the organisation.

Application of the Unit

This unit applies to floor and sales team members responsible for merchandise displays for a retail business.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Identify requirements for displays.	1.1. Identify <i>purpose, audience</i> and products for each display. 1.2. Identify organisational requirements and research <i>relevant information</i> where required. 1.3. Identify available budget and <i>resources</i> required to create the display. 1.4. Identify and consider <i>constraints or factors</i> that may affect the creation of the display.
2. Develop display ideas.	2.1. Generate ideas for the display using <i>creative thinking techniques</i> . 2.2. Test ideas against display and <i>organisational requirements</i> . 2.3. Discuss <i>display options</i> with relevant personnel. 2.4. Modify display ideas and refine according to <i>feedback</i> and confirm with <i>relevant personnel</i> .
3. Plan and build displays.	3.1. Develop ideas into simple <i>display plans</i> . 3.2. Source resources, materials and products to meet plan requirements. 3.3. Create displays following display plans. 3.4. Seek assistance from relevant personnel where required. 3.5. Review display and make refinements as required.
4. Maintain displays.	4.1. Regularly clean and tidy displays and replace products as necessary according to display plans. 4.2. Make changes or alterations to the display as appropriate.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:

- communicate display ideas to others
- seek and accept feedback through clear and direct communication
- use and interpret non-verbal communication
- use language and concepts appropriate to cultural differences
- creative thinking and design skills to generate ideas for improving displays
- initiative and enterprise skills to ensure efficient and cost-effective use of resources
- observation skills to identify when display needs to be changed, updated or altered
- sketching and writing skills to represent ideas in a simple display plan

Required knowledge

- audiences for and required effects of displays
- basic design principles, including:
 - colour
 - flow of product
 - shape
 - use of space
- organisational requirements, including:
 - environment, health and safety compliance
 - location of displays
 - visual merchandising standards
- visual merchandising display options

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- identifies the requirements for new displays
- creates display plans that meet the requirements of the product, audience and organisation
- plans and builds displays, according to plans
- maintains displays.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail work environment
- relevant documentation, such as store policy and procedures manuals
- display space
- a range of display products and materials.

Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: <ul style="list-style-type: none">• observation of performance in the workplace• third-party reports from a supervisor• customer feedback• written or verbal questioning to assess knowledge and understanding.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Purpose</i> of display may include:	<ul style="list-style-type: none">• attracting customers into the store• new products• new range• promotion• sale.
<i>Audience</i> for display may include:	<ul style="list-style-type: none">• internal and external foot or vehicular traffic• new or repeat customers• people from a range of social, cultural and ethnic backgrounds• people with varying physical and mental abilities• people of different ages• people with varying degrees of language and literacy.
<i>Relevant information</i> may be sourced from:	<ul style="list-style-type: none">• colleagues• direct observation• internet• magazines• marketing personnel• technical personnel• written reports.
<i>Resources</i> may include:	<ul style="list-style-type: none">• equipment and technology• fixtures and fittings

- labels and tickets
 - new or recycled materials
 - staff
 - time.
- Constraints or factors*** may include:
- availability of materials
 - budget
 - product characteristics
 - space
 - staff
 - time.
- Creative thinking techniques*** may include:
- brainstorming
 - creative writing
 - drawings
 - lateral thinking
 - mind mapping
 - product association
 - telling stories
 - using prompts
 - visualising.
- Organisational requirements*** may include:
- aesthetics
 - allocated space
 - branding
 - budget
 - work health and safety (WHS)
 - organisational standards
 - staff
 - store policy and procedures, including:
 - housekeeping and waste disposal procedures
 - WHS procedures.
- Display options*** may include:
- indoor or outdoor
 - lighting
 - sound
 - static or moving.
- Feedback*** may be sought and received:
- in groups
 - in writing
 - individually
 - verbally.
- Relevant personnel*** may include:
- external personnel with visual merchandising expertise
 - manager
 - team leader.
- Display plans*** may
- checklist of materials and equipment required

include:

- simple sketches of planned display.

Unit Sector(s)

Cross-Sector

Competency Field

Merchandising

SIRXMER303 Coordinate merchandise presentation

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXMER002A Coordinate merchandise presentation.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to apply knowledge of store merchandising and pricing policy and standards to support and coordinate relevant frontline staff members and ensure that they arrange, present and label or price merchandise according to store requirements.

It also involves informing staff of store merchandise presentation requirements for sales, promotions and special events, and providing feedback to management in regard to improvement of store marketing and promotional activities.

Application of the Unit

This unit applies to frontline visual merchandisers who supervise sales and other staff implementing and maintaining displays according to store merchandising standards.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Instruct and coordinate staff.	<p>1.1. Communicate and demonstrate store <i>display standards and requirements</i> to staff.</p> <p>1.2. Identify occurrence and timing of promotions and special events and inform staff.</p> <p>1.3. Identify items to be advertised or promoted, according to store merchandising policy and inform staff.</p> <p>1.4. Identify appropriate timing for dismantling and disposing of displays and inform staff.</p>
2. Supervise construction and maintenance of presentations.	<p>2.1. Plan and coordinate promotions and special events as directed by management.</p> <p>2.2. Plan and supervise construction and maintenance of <i>displays</i> in order to achieve balance and visual impact.</p> <p>2.3. Ensure product or service <i>display information</i> accurately depicts product or service being promoted.</p> <p>2.4. Ensure displays are completed according to required time schedule, with minimum disruption to <i>customer</i> service and traffic flow.</p> <p>2.5. Ensure displays are constructed and maintained in a safe and secure manner.</p> <p>2.6. Regularly monitor replenishment of merchandise and rotation of stock on store displays and take action as required.</p>
3. Implement merchandise pricing.	<p>3.1. Implement store policy and procedures in regard to pricing and ticketing.</p> <p>3.2. Identify current prices for products and services and amend according to store policy.</p> <p>3.3. Inform team members of price changes and current pricing policies.</p>
4. Review merchandise presentations.	<p>4.1. Evaluate promotions or special events against sales turnover and store presentation standards.</p> <p>4.2. Evaluate merchandise presentation against sales turnover and store presentation standards.</p> <p>4.3. Provide management with feedback in regard to improvement of</p>

store marketing and promotional activities.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:
 - give instructions
 - provide feedback to management through clear and direct communication
 - provide information to staff
 - share information
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
- literacy and numeracy skills to:
 - prepare machine or manual labels and tickets
 - present and price merchandise
 - read and interpret store policies and procedures
- observation skills to assess display and presentation compliance with visual merchandising standards
- technology skills to operate and maintain electronic labelling and ticketing equipment
- team leadership skills to:
 - instruct and support staff
 - supervise staff activities

Required knowledge

- availability and use of materials
- correct storage procedures for labelling and ticketing equipment and materials
- load-bearing capacity of fixtures and display areas
- location of display areas
- manufacturer specifications for the use of electronic labelling and ticketing equipment
- occurrence and timing of store promotions, including advertising, catalogues and special offers
- pricing procedures, including GST requirements
- principles and techniques of interpersonal communication skills
- principles of display and design
- procedure for accessing information and implementing price changes
- relevant industry codes of practice relating to coordinating merchandise presentation
- relevant legislation and statutory requirements relating to coordinating merchandise presentation, including Australian Consumer Law

- relevant work health and safety (WHS) legislation and codes of practice
- store policies and procedures in regard to:
 - efficient use of resources
 - merchandise range
 - merchandising, pricing and ticketing
 - minimum stock levels required
 - stock rotation and replenishment
 - storage of stock
- store promotional themes

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- implements and instructs staff regarding store display, merchandising, ticketing and pricing policies and procedures
- coordinates and monitors display, promotion and presentation of merchandise according to store policies and procedures and legislative requirements
- identifies products to be advertised or promoted according to store merchandising policies
- coordinates construction and maintenance of displays within time schedule set in regard to advertising, catalogues, special offers and in-store promotions in a safe and secure manner
- informs staff of pricing policies, promotions, special events, display standards and requirements, and timing for dismantling and disposing of displays
- evaluates and reports effectiveness of store merchandising and promotional activities to management and staff as required by store policies and procedures.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail work environment
- pricing and ticketing equipment
- merchandise for display
- display materials and props
- relevant documentation, such as:
 - store policy and procedures manuals on merchandising
 - WHS requirements

- manufacturer instructions and operation manuals on electronic ticketing equipment
- legislation and statutory requirements
- industry codes of practice
- a work team.

Method of assessment A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge.

Guidance information for assessment Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

Display standards and requirements may include:

- maintaining existing displays
- safety
- setting up new displays
- ticketing and display signage.

Staff may be:

- from a range of social, cultural and ethnic backgrounds
- from within or outside own work team
- full-time, part-time, casual or contract.

Displays may be located in a variety of areas, including:

- fixtures on floor
- interior or exterior
- permanent or temporary
- publicly accessible areas
- shelves
- walls
- windows.

Display information may include:

- discount information
- price

- product brand
- special guarantees
- product characteristics, such as:
 - size
 - weight capacity
 - materials.

- Customers* may include:
- internal and external contacts
 - new or repeat contacts
 - people from a range of social, cultural and ethnic backgrounds
 - people with varying physical and mental abilities.

Unit Sector(s)

Cross-Sector

Competency Field

Merchandising

SIRXMER406 Monitor in-store visual merchandising display

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXMER003A Monitor in-store visual merchandising display.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to interpret organisational visual merchandising plans and manuals and monitor in-store displays to ensure that they reflect and maintain current organisational visual merchandising directions.

It involves applying fundamental design principles, making decisions with regard to merchandise for display, and ensuring that displays contribute to the visual merchandising standards of the organisation and are constructed and located to ensure customer and staff safety.

Application of the Unit

This unit applies to frontline visual merchandising team members and other staff with a responsibility for monitoring displays to ensure they reflect and maintain current organisational visual merchandising directions.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Interpret a visual merchandising plan.	1.1. Identify <i>design requirements</i> of visual merchandising plan or manual. 1.2. Source <i>resources required</i> to implement plan. 1.3. Identify <i>factors that may affect the plan</i> . 1.4. Apply organisation's visual merchandising standards to the plan.
2. Monitor display requirements.	2.1. Regularly monitor display to ensure it meets the requirements of the <i>visual merchandising plan</i> . 2.2. Identify <i>damage or changes to the display</i> . 2.3. Take action to rectify unwanted changes to the display.
3. Maintain displays in line with organisational requirements and plan.	3.1. Maintain display so that it is clean and tidy. 3.2. Make additions or changes to display to ensure it consistently adheres to the visual merchandising plan. 3.3. Maintain organisation's requirements for visual merchandising in the display.
4. Contribute to the visual merchandising standards of the organisation.	4.1. Interpret visual merchandising standards of the organisation. 4.2. Identify opportunities for improving visual merchandising standards. 4.3. Make contributions to the visual merchandising standards as appropriate.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- artistic interpretation skills to create displays according to visual merchandising standards
- communication skills to share ideas
- creative thinking skills to generate ideas for improving visual merchandising standards
- literacy skills to interpret visual merchandising manuals

- observation skills to identify damage to displays or deviations from visual merchandising standards
- practical skills to maintain and update displays according to the visual merchandising plan

Required knowledge

- basic design principles
- basic principles of visual merchandising
- work health and safety (WHS) requirements relating to monitoring displays
- organisation's visual merchandising principles
- resources required to implement visual merchandising plans
- procedures for safe use of tools, equipment and materials used in visual merchandising displays

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- interprets and identifies the design requirements of a visual merchandising plan
- monitors the display closely and completes regular maintenance to ensure it meets the requirements of the visual merchandising plan and the organisation's visual merchandising standards
- contributes appropriately to the ongoing development of the organisation's visual merchandising standards.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail visual merchandising work environment
- relevant documentation, such as:
 - store policy and procedures manuals
 - store visual merchandising standards.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge.

Guidance information

Holistic assessment with other units relevant to the industry sector,

for assessment workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

Design requirements

may include:

- colours used
- functionality
- layout of display
- location of display in store
- merchandise for display
- size of display.

Resources required may include:

- fixtures and fittings
- lights
- materials
- people
- supports
- time.

Factors that may affect the plan may include:

- availability of display stands and structures
- availability of staff
- budget requirements
- merchandise availability
- store promotions
- time requirements.

Visual merchandising plan may include:

- display location
- retail image
- store plan and design.

Damage or changes to the display may include:

- changes in the appearance of the display
- damage to fixtures, fittings or display supports
- damage to items on display.

Unit Sector(s)

Cross-Sector

Competency Field

Merchandising

SIRXQUA001A Develop innovative ideas at work

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to systematically generate and develop innovative ideas in the workplace.

Application of the Unit

This unit applies to team members who are encouraged develop innovative ideas in the workplace. It requires the skills to interpret or observe a need and develop a detailed idea. It involves the creative generation and discussion of a number of ideas or solutions, accepting positive and negative feedback, and testing ideas in order to establish and present a workable outcome that meets the needs of the end user.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Interpret the need for innovation.	1.1.Observe the need for <i>innovation</i> within workplace context. 1.2.Challenge assumptions about products and processes to identify opportunities for innovation. 1.3.Project possible future contexts and environments for the innovation. 1.4.Define <i>end user requirements</i> . 1.5.Identify <i>resources and constraints</i> . 1.6.Research <i>factors and ethical considerations</i> that may impact on the idea. 1.7.Access relevant <i>organisational knowledge</i> .
2. Generate ideas.	2.1.Conceptualise ideas using a range of <i>creative thinking techniques</i> . 2.2.Apply relevant knowledge to explore a range of approaches. 2.3.Seek <i>stimulation from alternative sources</i> . 2.4.Test ideas against brief and other factors. 2.5.Select preferred option.
3. Collaborate with others.	3.1.Develop ideas in conjunction with <i>relevant people</i> . 3.2.Seek and accept <i>feedback</i> from relevant people in an appropriate fashion. 3.3.Modify ideas according to feedback. 3.4.Maintain and utilise a <i>network of peers</i> to discuss ideas.
4. Analyse and reflect on ideas.	4.1.Analyse ideas from different perspectives. 4.2.Use appropriate strategies to capture <i>reflections</i> . 4.3.Examine ideas to ensure they meet context requirements, best practice and future needs. 4.4.Allow time for the development and analysis of ideas.
5. Represent ideas.	5.1.Select an appropriate <i>communication technique</i> for the target <i>audience</i> . 5.2.Develop the <i>presentation of the idea</i> with the audience in mind. 5.3.Present the idea to educate and inform the client.

- 5.4. Modify the idea according to client feedback.
- 6. Evaluate ideas.
 - 6.1. **Review** ideas using appropriate *evaluation methods* to ensure they meet required needs.
 - 6.2. Modify ideas as required.

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- interpersonal skills to:
 - collaborate with others and represent ideas through clear and direct communication
 - ask questions to identify and confirm requirements
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
 - work within teams
- analytical and lateral thinking skills to examine self and external factors

Required knowledge

- relevant technical knowledge
- broad industry and market knowledge
- organisational culture
- social, environmental and work culture impacts
- principles of innovation

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment Evidence of the following is essential:

and evidence required to demonstrate competency in this unit

- interprets the need for innovation in the workplace
- identifies resources and constraints and researches affecting factors when generating innovative ideas
- generates ideas using creative thinking techniques
- tests ideas against brief and other relevant factors
- presents and discusses ideas with relevant people
- seeks feedback and modifies ideas accordingly

- analyses and reflects on ideas to ensure they meet end user requirements
- presents ideas using appropriate communication methods
- reviews and modifies idea using appropriate evaluation methods.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated work environment
- relevant documentation, such as store policy and procedures manuals
- a range of communication equipment.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- a detailed case study
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Innovation may include:

- generating new ideas or solutions
- developing new uses for old ideas and making them useful or a means of improvement.

End user requirements may refer to:

- who will be using the end product
- why the product or process is needed
- how will it be used
- advantages will it provide
- where it will be used.

Resources and constraints may

- time required

include:

- costs
- equipment
- human resources
- work culture
- management practice
- technology needed.

Factors and ethical considerations may include:

- aesthetic requirements
- functionality
- information available
- WHS
- environmental considerations.

Organisational knowledge may include:

- technical knowledge
- information gained from books and audiovisual resources
- knowledge from different work areas
- information from work colleagues
- work processes
- product
- materials
- systems
- tools
- working conditions.

Feedback may be:

- formal or informal
- verbal
- in writing
- in groups
- individual.

Creative thinking techniques may include:

- brainstorming
- visualising
- making associations
- building on associations
- telling stories
- creative writing
- lateral thinking games
- mind mapping, drawings
- six thinking hats
- using prompts.

Stimulation from alternative sources may include:

- reading books and industry journals
- talking with colleagues and friends

- visiting art galleries and museums
 - going to industry workshops
 - networks.
- Relevant people** may include:
- colleagues
 - team members
 - supervisors
 - managers
 - the client.
- Maintaining a **network of peers** may include:
- participating in forums
 - participating in industry training
 - attending workshops
 - becoming a member of a network.
- Capture of **reflections** may include:
- mind mapping
 - assessing alternatives
 - drawing comparisons
 - imagining possible outcomes
 - imagining best and worst case scenarios.
- Communication techniques** may include:
- writing a proposal
 - building a model
 - showing a film
 - presenting a talk
 - preparing a report
 - drawing a diagram.
- The **audience** may include:
- external contacts
 - internal contacts, such as management and other team members
 - groups or individuals
 - people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities.
- Presentation of ideas** may include:
- helping the client visualise and understand the idea
 - actively listening
 - asking questions
 - accepting others opinions
 - explaining the proposal
 - clarifying details.
- Formal review** of the idea may involve:
- checking that the idea can be implemented
 - that it meets the client and end user needs
 - best practice

Evaluation methods may include:

- financial requirements
- resource requirements.
- developing checklists
- discussing the process with colleagues or supervisors
- writing a report of the outcomes.

Unit Sector(s)

Cross-Sector

Competency field

Quality and Innovation

SIRXRSK001A Minimise theft

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to minimise theft in a retail environment. It involves applying routine store security, taking appropriate action to minimise theft and maintaining security of cash, registers or terminals and keys.

Application of the Unit

Application of the unit

This unit applies to frontline service personnel. It requires the team member to apply store policy and procedures and industry codes of practice in regard to store security and theft prevention, reporting theft or suspicious behaviour to relevant personnel and monitoring stock, work areas, customers and staff to minimise opportunities for theft.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units

Nil

Employability Skills Information

Employability skills The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Apply routine store security.	1.1 Apply store <i>security systems and procedures</i> according to store policy. 1.2 Handle and secure cash according to <i>store policy and procedures</i> . 1.3 Observe and deal with suspect behaviour by <i>customers</i> according to store policy and <i>legislative requirements</i> . 1.4 Deal with internal and external theft according to store policy and legislative requirements. 1.5 Store products and equipment in a secure manner.
2 Minimise theft.	2.1 Take appropriate action to minimise theft by applying store procedures and legislative requirements. 2.2 Match merchandise to correct price tags. 2.3 Maintain surveillance of merchandise according to store policy and <i>legislative requirements</i> .

ELEMENT

PERFORMANCE CRITERIA

- 2.4 Check customers' bags as required at point of sale according to store policy and legislative requirements.
- 2.5 Maintain security of cash, cash register and keys according to store policy.
- 2.6 Maintain security of stock, cash and equipment in regard to customers, *staff* and outside contractors according to store policy and legislative requirements.
- 2.7 Deal with suspected or potential thieves according to store policy and procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- literacy and numeracy skills in:
 - recording of stolen items
 - reporting of theft.

The following knowledge must be assessed as part of this unit:

- store policy and procedures in regard to:
 - security
 - checking customers' bags and purchases
 - reporting problems and faults
- relevant legislation and statutory requirements, particularly in regard to checking customers' bags and purchases
- Trade Practices and Fair Trading Acts
- store merchandising system
- security procedures relating to cash and non-cash transactions
- location and operation of store security equipment
- reporting procedures for internal and external theft or suspicious circumstances.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- consistently applies store policy and procedures and legislative requirements, including industry codes of practice in regard to store security and theft prevention in a range of contexts and situations
- consistently applies store policy and procedures in regard to following security procedures and for reporting theft or suspicious behaviour to relevant personnel
- monitors stock, work area, customers and staff to minimise opportunities for theft.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated work environment
- relevant documentation, such as:
 - store policy and procedures manuals
 - legislation and statutory regulations
 - industry codes of practice
 - Trade Practices and Fair Trading Acts
- relevant security equipment
- point-of-sale equipment.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a simulated work environment
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge

EVIDENCE GUIDE

- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXCCS001A Apply point-of-sale handling procedures
- SIRXCCS002A Interact with customers
- SIRXINV001A Perform stock control procedures
- SIRXFIN001A Balance point-of-sale terminal.

Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Security systems and procedures may deal with:

- customers
- staff
- keys
- visitors, sales representatives, contractors and vendors
- stock
- records
- cash, credit cards

RANGE STATEMENT

- equipment, including:
 - alarm systems
 - video surveillance
 - mirrors
 - security tags
- locked and secure areas
- premises
- armed hold-up.

Store policy and procedures may relate to:

- security
- surveillance of merchandise
- reporting problems and faults.

Customers may include:

- people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities.

Legislative requirements may include:

- privacy and confidentiality laws
- Trade Practices and Fair Trading Acts
- consumer law
- awards and agreements
- property offences
- credit laws
- reporting procedures
- criminal law.

Staff may include:

- management
- other staff members
- full-time, part-time and casual staff
- people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities.

Unit Sector(s)

Sector Cross-Sector

Competency field

Competency field Risk Management and Security

SIRXRSK002A Maintain store security

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to maintain store security in a retail environment. It involves implementing store policy and procedures to ensure store security, informing team members and providing ongoing supervision and training to facilitate awareness and detection of theft.

Application of the Unit

This unit applies to team leaders and supervisors who interpret, apply and monitor security procedures according to store policy, industry codes of practice, relevant legislation and statutory requirements. A person undertaking this role maintains frontline security as well as reporting security concerns and providing ongoing supervision and training for staff on security procedures.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Monitor and maintain store security.	<p>1.1. Implement <i>store policy and procedures</i> to ensure store security is maintained.</p> <p>1.2. Monitor and review <i>security procedures</i>, according to store policy and <i>legislative requirements</i>.</p> <p>1.3. Implement procedures to minimise theft of easily stolen merchandise.</p> <p>1.4. Maintain security of cash, cash register and keys according to store policy.</p> <p>1.5. Implement store procedures in regard to <i>transactions</i>.</p> <p>1.6. Inform <i>team members</i> of store policy and procedures in regard to security.</p> <p>1.7. Provide team members with <i>feedback</i> in regard to implementation or non implementation of store security procedures.</p> <p>1.8. Provide staff with ongoing supervision and <i>training</i> to facilitate awareness and detection of theft.</p> <p>1.9. <i>Report</i> matters likely to affect store security, according to store policy.</p>
2. Facilitate awareness and detection of theft.	<p>2.1. Inform <i>team members</i> of store policy and procedures in regard to security.</p> <p>2.2. Provide team members with <i>feedback</i> in regard to implementation or non implementation of store security procedures.</p> <p>2.3. Provide staff with ongoing supervision and <i>training</i> to facilitate awareness and detection of theft.</p>

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- interpersonal skills to:
 - provide information, feedback and training to staff

- report relevant matters through clear and direct communication
- ask questions to identify and confirm requirements
- share information
- give instructions
- use and interpret non-verbal communication
- provide team leadership
- literacy skills to:
 - interpreting and applying Work Health and Safety (WHS) documents
 - reporting procedures
 - analytical skills to evaluate performance analysis

Required knowledge

- store policy and procedures in regard to:
 - security
 - cash and non-cash transactions
 - external or internal theft
 - suspicious circumstances
 - armed robbery
 - staff security training
 - procedures for opening and closing premises
- relevant legislation and statutory regulations, particularly in relation to checking of customers' bags and purchases
- types of store alarm and security systems used in the retail industry

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit Evidence of the following is essential:

- consistently applies store policy and procedures, industry codes of practice, relevant legislation and statutory requirements in regard to store security
- accurately applies relevant legislation and statutory regulations particularly in regard to checking of customers' bags and purchases
- interprets, applies and monitors security procedures in regard to:
 - cash handling, and cash and non-cash transactions

- internal or external theft or suspicious circumstances
- armed robbery
- opening and closing premises
- implements store policy and procedures in regard to:
 - reporting on matters related to store security
 - staff security supervision and training.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
 - store policy and procedures in regard to security
 - legislation and statutory requirements
 - WHS legislation
- relevant equipment such as:
 - alarm systems
 - point-of-sale equipment
 - communication equipment.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- third-party reports from a supervisor
- observation of performance in the workplace
- a role play
- customer feedback
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXOHS002A Maintain store safety.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the

performance criteria is detailed below.

Store policy and procedures in regard to:

- security
- checking bags
- cash and non-cash transactions
- surveillance of merchandise
- reporting problems and faults.

Security procedures may deal with:

- customers
- staff or staff property
- visitors, sales representatives, contractors and vendors
- stock
- records
- cash and cash movement
- equipment
- premises
- opening and closing of premises
- theft
- armed robbery
- events likely to endanger customers or staff.

Legislative requirements may include:

- privacy or confidentiality laws
- Trade Practices and Fair Trading Acts
- consumer law
- awards or agreements
- property offences
- credit laws
- reporting procedures
- criminal law.

Transactions may include:

- cash
- EFTPOS
- cheques
- credit cards or store cards
- smart cards
- lay-by
- returns
- exchanges
- gift vouchers.

Team members may include:

- small work teams
- store team
- corporate team

- full-time, part-time, casual or contract staff
- people with varying degrees of language and literacy
- people from a range of cultural, social and ethnic backgrounds
- people with a range of responsibilities and job descriptions.

Feedback may be given:

- verbally
- in writing
- in groups
- individually.

Training may include:

- mentoring or coaching
- off-the-job training
- on-the-job training.

Report may be:

- verbal
- written
- formal
- informal.

Unit Sector(s)

Cross-Sector

Competency field

Risk Management and Security

SIRXRSK003A Apply store security systems and procedures

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to maintain and use store security equipment, ensuring the safety and well being of staff and customers, the detection and apprehension of thieves and the application of post-apprehension procedures according to State and Territory laws.

This unit builds on unit SIRXRSK001A Minimise theft. It involves the maintenance and use of store security equipment, ensuring the safety and well being of staff and customers, the detection and apprehension of thieves and the application of post-apprehension procedures according to State and Territory laws.

Application of the Unit

This unit applies to team members who interpret, understand and apply store security procedures and relevant legislation, and operate and maintain security equipment, to detect and report theft, property offences and security risks.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Maintain store security systems.	1.1. Operate <i>security equipment</i> , according to manufacturer instructions and <i>store policy and procedures</i> . 1.2. Regularly check security equipment to ensure operational effectiveness and identify faults. 1.3. Organise regular servicing according to store procedures or manufacturer specifications. 1.4. Apply surveillance of specific store areas according to store procedures and <i>legislative requirements</i> . 1.5. Enter <i>security data</i> accurately and update as required by store policy and procedures.
2. Deal with potentially unsecured situations.	2.1. Identify factors that increase security risk and regularly monitor, record and <i>report</i> on them according to instructions.

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- technical skills to apply surveillance techniques
- literacy and numeracy skills to:
 - interpret legal documents
 - interpret store policy
 - record security data
 - generate reports

Required knowledge

- store policy and procedures in regard to:
 - dealing with theft and other property offences, including customer bag checking procedures
 - dealing with other property offences, including criminal deception (false pretences) and criminal (wilful) damage
 - operation and maintenance of store security equipment, taking into account manufacturer maintenance and operating procedures
 - reporting requirements
- relevant law and industry codes of practice and their application in relation to store policy and procedures, including privacy and the checking of customers' bags and purchases

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- consistently operates and maintains store security equipment
- identifies and reports potential security risks according to store policy.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated work environment
- relevant documentation, such as:
 - store policy and procedures manuals
- equipment such as:
 - security systems
 - communication equipment.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a role play
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge

- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Security equipment used in stores may include:

- alarms
- surveillance equipment such as cameras and closed-circuit television
- security tags
- security bar codes.
- apprehension of thieves
- operation and maintenance of security equipment.

Store policy and procedures in regard to:

- privacy or confidentiality laws
- Trade Practices and Fair Trading Acts
- consumer law
- awards and agreements
- property offences
- credit laws
- reporting procedures
- criminal law.

Legislative requirements may include:

Security data may be sourced through:

- observation
- interviews
- records of complaint
- inventory reports
- financial reports
- surveillance footage.

Reports may be delivered:

- verbally
- in writing
- formally
- informally.

Unit Sector(s)

Cross-Sector

Competency field

Risk Management and Security

SIRXSL S002A Advise on products and services

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to apply a depth of specialist or general product knowledge and a need for experience and skill in offering advice to customers.

Application of the Unit

This unit applies to team member who develop, maintain and convey detailed and specialised product knowledge to customers and other staff in accordance with store policy and relevant legislation. Specialist sales personnel undertake this function.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Develop product and service knowledge.	1.1. Develop and maintain <i>product knowledge</i> according to <i>store policy</i> and <i>legislative requirements</i> . 1.2. Convey product knowledge to other <i>staff</i> as required. 1.3. Research and apply comparisons between products and services. 1.4. Demonstrate knowledge of competitors' product and service range and <i>pricing structure</i> .
2. Recommend specialised products or services.	2.1. Evaluate merchandise according to <i>customer requirements</i> . 2.2. Demonstrate features and benefits of products and services to <i>customer</i> to create a buying environment. 2.3. Apply detailed specialised knowledge of product to provide accurate advice to customers.

Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills

- interpersonal skills to:
 - convey product knowledge to staff
 - apply knowledge to provide advice to customers
 - handle difficult customers through clear and direct communication
 - ask questions to identify and confirm requirements
 - share information
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
- literacy skills in regard to:
 - use a range of communication and electronic equipment
 - access relevant product and service information
 - interpret product information
 - interpret store policies and procedures

- record information
- numeracy skills to:
 - estimate and calculate costs relevant to pricing products

Required knowledge

- specialised product knowledge, including:
 - warranties
 - benefits and features
 - shelf life and use-by date
 - storage requirements
 - ingredients or materials contained in product
 - product and ingredient origins
 - care and handling of products
 - corresponding or complementary products and services
 - stock availability
- store and industry manuals and documentation
- stock and merchandise range
- service range
- store policies and procedures including:
 - procedures for taking orders
 - pricing procedures, including GST requirements
- relevant legislation and statutory requirements and industry code of practice relating to the retail industry

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit Evidence of the following is essential:

- consistently applies store policies and procedures and industry codes of practice in regard to customer service and selling products and services
- develops, maintains and conveys product knowledge to customers and other staff
- applies detailed and specialised product knowledge to provide accurate advice according to the needs of the customer.

Context of and specific

Assessment must ensure access to:

resources for assessment

- a retail work environment
- a range of stock and merchandise
- relevant documentation, such as:
 - price lists
 - policy and procedures manuals
- a range of customers with different requirements
- a range of communication equipment.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the candidate in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Product knowledge may include:

- brand options
- product features and benefits
- warranties
- safety features
- use-by dates
- handling and storage requirements
- stock availability
- price.

Product knowledge may be developed and maintained by:

- accessing the internet
- attending product launches
- attending product seminars
- discussions with staff
- accessing product information booklets and

- Store policy* and procedures in regard to:
- pamphlets.
 - interaction with customers
 - selling products and services.
- Legislative requirements* may include:
- Trade Practices and Fair Trading Acts
 - tobacco laws
 - liquor laws
 - lottery legislation
 - industry codes of practice
 - WHS
 - sale of second-hand goods
 - sale of X and R rated products
 - trading hours
 - transport, storage and handling of goods.
- Staff* may include:
- full-time, part-time or casual
 - under contract
 - people with varying degrees of language and literacy
 - people from a range of cultural, social and ethnic backgrounds
 - people with a range of responsibilities and job descriptions.
- Customer requirements* may include:
- specific brand
 - sizing
 - quality
 - quantity
 - price range
 - usage.
- Customers* may include:
- new or repeat contacts
 - external and internal contacts
 - customers with routine or special requests
 - people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities.
- Pricing structure* may include:
- sales reductions
 - pricing procedures, including GST requirements
 - mark-downs.

Unit Sector(s)

Cross-Sector

Competency field

Sales

SIRXSL S201 Sell products and services

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXSL S001A Sell products and services.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to sell products and services in a retail environment.

It involves the use of sales techniques and encompasses key selling skills, from approaching the customer to closing the sale.

It requires a basic level of product knowledge and the recognition and demonstration of verbal and non-verbal communication skills to determine customer requirements, sell the benefits of products and services, overcome objections and close sales.

Personal evaluation is used to maximise sales, according to industry codes of practice, relevant legislation and store policy.

Application of the Unit

This unit applies to frontline sales personnel.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Develop and apply product knowledge.	<p>1.1. Develop <i>product knowledge</i> by accessing <i>relevant sources of information</i> and confirm with relevant staff.</p> <p>1.2. Apply knowledge of the use and application of relevant products and services in interactions with customers according to store policy and <i>legislative requirements</i>.</p> <p>1.3. Identify gaps in product knowledge and resolve by accessing relevant sources of information.</p>
2. Approach customer.	<p>2.1. Identify <i>customers</i> by name where possible.</p> <p>2.2. Develop knowledge of customer buying behaviour by accessing relevant sources of information.</p> <p>2.3. Determine and apply appropriate timing of customer approach according to store policy and customer behaviour.</p> <p>2.4. Initiate customer contact according to store policy.</p> <p>2.5. Convey a positive impression to encourage customer interest according to store policy.</p>
3. Gather and respond to information.	<p>3.1. Apply questioning techniques and listening skills to determine customer buying motives and requirements.</p> <p>3.2. Interpret and clarify non verbal communication cues.</p> <p>3.3. Direct customer to specific merchandise according to customer requirements and store policy.</p>
4. Sell benefits.	<p>4.1. Match customer needs to appropriate products and services.</p> <p>4.2. Communicate knowledge of product features and benefits clearly to customers.</p> <p>4.3. Describe product use and safety requirements to customers.</p> <p>4.4. Refer customers to appropriate product specialist as required.</p> <p>4.5. Answer <i>routine customer questions</i> about merchandise accurately and honestly or refer to senior sales staff.</p>

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|----------------------------------|---|
| 5. Overcome objections. | 5.1. Identify and acknowledge customer objections according to store policy. |
| | 5.2. Categorise objections into price, time and merchandise characteristics and consider solutions. |
| | 5.3. Offer solutions to customer objections according to store policy. |
| | 5.4. Apply <i>problem solving</i> within personal scope of responsibilities to overcome customer objections or refer to senior staff. |
| 6. Close sale. | 6.1. Monitor, identify and respond appropriately to customer buying signals. |
| | 6.2. Encourage customer to make purchase decisions. |
| | 6.3. Select and apply appropriate method of closing sale. |
| 7. Maximise sales opportunities. | 7.1. Recognise and apply opportunities for making additional <i>sales</i> according to store policy. |
| | 7.2. Advise customer of complementary products or services according to customer's identified need. |
| | 7.3. Review personal sales outcomes and consider strategies to maximise future sales in consultation with relevant staff. |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:
 - handle difficult customers
 - verbal and non-verbal communication skills to:
 - question, listen and observe
 - overcome objections and close sale
- literacy and numeracy skills to:
 - handle payments for goods
 - read product information
 - read store policies and procedures
 - record information
 - weigh and measure goods
- selling skills to use a range of selling techniques

Required knowledge

- customer types and needs, including:
 - customer behaviour and cues

- customer buying motives
- demographics, lifestyle and income
- individual and cultural differences
- types of customer needs, such as:
 - functional
 - psychological
- relevant industry codes of practice, legislation and statutory requirements relating to the sale of products and services
- selling techniques, including:
 - add-ons and complementary sales
 - closing techniques
 - opening techniques
 - overcoming customer objections
 - recognising buying signals
 - using strategies to focus customer on specific merchandise
- specific product knowledge for area or section
- store merchandise and service range
- store policies and procedures in regard to:
 - allocated duties and responsibilities
 - selling products and services and sales performance

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- applies product knowledge and uses appropriate sales approach to sell the benefits of products and services, overcome objections and close sales
- uses questioning, listening and observation skills to determine customer requirements
- applies store policies and procedures in regard to selling products and services
- maximises sales opportunities according to store policies and procedures
- applies industry codes of practice, relevant legislation and statutory requirements in regard to selling products and services
- evaluates personal sales performance to maximise future

sales.

Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • a real or simulated retail work environment • relevant documentation, such as policy and procedures manuals • a range of customers with different requirements • a range of merchandise and products appropriate to the retail workplace • product labels and sources of product information.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • observation of the candidate in the workplace • customer feedback • answers to questions about specific skills and knowledge • review of portfolios of evidence and third-party workplace reports of on-the-job performance.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Product knowledge</i> may include:	<ul style="list-style-type: none"> • features and benefits • handling and storage requirements • price • safety features • stock availability • use-by dates • warranties.
<i>Relevant sources of information</i> may include:	<ul style="list-style-type: none"> • demonstrations • internet • labels • product profiles

- staff members
 - store or supplier product manuals
 - store tours
 - videos.
 - industry codes of practice
 - liquor laws
 - lottery legislation
 - work health and safety (WHS)
 - sale of second-hand goods
 - sale of X and R-rated products
 - tobacco laws
 - Australian consumer law and fair trading Acts
 - trading hours
 - transport, storage and handling of goods.
 - customers with routine or special requests
 - internal and external contacts
 - new or repeat contacts
 - people from a range of social, cultural and ethnic backgrounds
 - people with varying physical and mental abilities.
 - availability
 - features and benefits
 - price and price reductions
 - quality.
 - resource implications
 - store policies and procedures.
 - face-to-face
 - online
 - over the telephone.
- Legislative requirements*** may include:
- Customers*** may include:
- Routine customer questions*** may relate to:
- Problem solving*** may be affected by:
- Sales transactions*** may be completed:

Unit Sector(s)

Cross-Sector

Competency Field

Sales

SIRXSL303 Build relationships with customers

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXSL004A Build relationships with customers.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop and maintain expert knowledge to provide accurate product information to customers, including post-sales support.

It also covers communication, analysis and sales techniques to plan and implement sales presentations, build positive relationships with customers, and resolve customer complaints to ensure positive business outcomes.

Application of the Unit

This unit applies to senior sales personnel.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Develop relationships with customers.	<p>1.1. Establish rapport with <i>customers</i> and express genuine interest to <i>clarify customer requirements</i> and enhance <i>outcomes</i>.</p> <p>1.2. Maintain <i>professional ethics</i> with the customer to promote store image and credibility.</p> <p>1.3. Identify <i>customer needs and preferences</i> to maximise sales opportunities.</p> <p>1.4. Maximise sales opportunities by use of add-on and complementary <i>sales techniques</i>.</p> <p>1.5. Give customer space and time to evaluate purchase decision, while using time to maximum advantage for customer and store.</p> <p>1.6. Use effective methods to close sales.</p>
2. Apply expert knowledge.	<p>2.1. Provide customer with accurate information regarding product and service appraisals, correct statements and warranties according to <i>legislative requirements</i>.</p> <p>2.2. Provide detailed knowledge of supplier or manufacturer information according to customer needs and commercial confidentiality guidelines.</p> <p>2.3. Provide evaluation of product range, demonstrate features and benefits of products or services where appropriate, and make recommendations to the customer to maximise sales potential.</p> <p>2.4. Maximise customer interest in product or service through price negotiation where applicable and offer payment and credit options according to <i>store policy</i>.</p> <p>2.5. Calculate prices and discounts according to pricing determinants and store policy.</p>
3. Provide post-sales support.	<p>3.1. Provide evidence of ongoing support as sale is concluded.</p> <p>3.2. Explain <i>back-up service</i> and reassure customer according to legislative requirements and store policy.</p> <p>3.3. Provide customer with store or salesperson's contact details to ensure customer follow-up according to store policy.</p> <p>3.4. Enter customer and transaction details into <i>customer database</i> according to store policy.</p>

4. Plan sales presentations.
 - 4.1. Plan presentation to complement *product characteristics*.
 - 4.2. Select client group according to product characteristics and store merchandising policy.
 - 4.3. Access *promotional materials* where required and distribute to client group.
 - 4.4. Select and prepare a range of products or services for presentation to reflect store image, demographics and merchandising plan.
5. Implement sales presentations.
 - 5.1. Ensure sufficient numbers of adequately briefed support staff, where required, for presentation.
 - 5.2. Apply communication skills to effectively create interest, focus attention, and encourage customer interaction with individuals or groups.
 - 5.3. Demonstrate products or services to create a buying environment.
 - 5.4. Measure results of sales presentation according to predetermined criteria, review overall performance and results, and apply information to enhance future *sales presentations*, according to store sales policy.
6. Maintain and use a customer database.
 - 6.1. Maintain customer confidentiality as required by store policy and legislative requirements.
 - 6.2. Develop and maintain accurate *customer records* and store securely according to store policy and procedures.
 - 6.3. Identify and follow up regular customers according to store marketing policy.
 - 6.4. Use customer records to advise customers on products and services of possible interest.
 - 6.5. Implement *customer loyalty schemes* where required according to store promotional activities.
7. Deal with difficult customers.
 - 7.1. Acknowledge customer complaints and problems and reassuringly support difficult customers to produce positive outcome.
 - 7.2. Use questioning and active listening to encourage customer to verbalise issue and minimise customer frustration.
 - 7.3. Develop customer's confidence in the candidate and product or service to promote long-term trust and commitment to store.
 - 7.4. Establish mutually acceptable resolution of complaint.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to resolve conflict
- literacy and numeracy skills to:
 - access and read relevant product information
 - calculate prices and discounts
 - read store policies and procedures
 - record client and sales information
- sales skills to apply selling techniques, including:
 - add-ons and complementary sales
 - identifying buying signals
 - opening and closing techniques
 - overcoming customer objections
 - presenting product information
 - promoting enhanced sustainability features of selected products and services
 - using strategies to focus customer on specific merchandise

Required knowledge

- customer types and needs, including:
 - customer buying motives, customer behaviour and cues
 - functional and psychological needs
 - individual and cultural differences, demographics, lifestyle and income
- work health and safety (WHS) requirements relating to:
 - manual handling
 - plant and equipment
 - hazardous substances and dangerous goods
 - workers compensation
- relevant industry codes of practice, legislation and statutory requirements relating to building relationships with clients
- store policies and procedures in regard to:
 - efficient use of resources
 - establishing, maintaining and using customer records
 - methods of maintaining customer confidentiality and secure storage of customer details
 - price negotiation and payment and credit options
 - pricing, including GST requirements
 - resolving customer complaints
 - updating and maintaining customer mailing lists
- store and area merchandise and service range

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- applies:
 - detailed knowledge of manufacturer and supplier supply, back-up service and warranty information to enhance customer support
 - industry codes of practice, relevant legislation and statutory requirements in regard to selling products and services
 - store policies and procedures in regard to selling products and services, dealing with customers, planning and implementing sales presentations, and providing after-sales support
- develops customer commitment to store and builds return customer base by establishing rapport and relationship with customer, maintaining professional ethics, and discerning customer buying motives, requirements and preferences
- establishes, records and maintains customer records and details, maintaining customer confidentiality, ensuring secure storage of data, and using customer records to maximise customer interest and create a buying atmosphere
- evaluates personal or team sales performance to maximise future sales
- maximises sales opportunities by using effective selling techniques, applying detailed product knowledge, and using an appropriate sales approach to sell the benefits of products, overcome objections and close sales
- plans, prepares and conducts sales presentations and briefs
- supports staff where required, to create a buying environment and maximise sales performance
- resolves customer complaints by acknowledging problems and supporting customer to produce positive outcomes and obtain mutually acceptable complaint resolution
- uses effective questioning, listening and observation skills to determine customer requirements.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant sources of product information
- relevant documentation, such as:

- policy and procedures manuals
- industry codes of practice and relevant legislation
- WHS legislation and codes of practice
- a range of customers with different requirements
- an appropriate range of products and equipment
- a customer database system.

Method of assessment A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the candidate in the workplace
- customer feedback
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

Customers may include:

- a single customer, couples, families or groups
- customers with routine or special requests
- internal and external contacts
- new or repeat contacts
- people from a range of social, cultural and ethnic backgrounds
- people with varying physical and mental abilities.

Clarification of customer requirements may be achieved by:

- active listening
- appropriate questioning
- empathy
- observation
- reassurance and confirmation.

Outcomes may include:

- credibility of store
- customer commitment

- Maintaining *professional ethics* with the customer may include:
- customers' trust
 - increased return customer base.
 - confirmed appraisals of products and services
 - honesty
 - positive statements.
- Customer needs and preferences* may include:
- brand
 - customer physical needs
 - price
 - product characteristics
 - product type
 - size.
- Sales techniques* will include:
- add-on and complementary products and services
 - selling up or down
 - suggestive selling
 - variety of methods of closing sales.
- Legislative requirements* may include:
- environmental protection legislation
 - health and welfare law specific to local government, state and federal legislation
 - liquor laws
 - WHS
 - pricing procedures, including GST requirements
 - privacy laws
 - sale of second-hand goods
 - tobacco laws
 - Australian Consumer Law and fair trading Acts
 - transport, storage and handling of goods.
- Store policy* and procedures in regard to:
- dealing with difficult customers
 - maintaining and using client records
 - promotional, marketing, discounting and reward programs
 - resolving customer complaints
 - selling products and services.
- Back-up service* may include:
- delivery specifications
 - financial products and services
 - installation
 - returns policies
 - technical support
 - warranties and guarantees.
- Customer database* may be:
- computer-based
 - manual.

- Product characteristics*** may include:
- features and benefits
 - price range
 - supplier or manufacturer information
 - target group.
- Promotional materials*** may include:
- brochures
 - business cards
 - pamphlets
 - posters
 - promotional merchandise
 - vouchers.
- Sales presentations*** may be:
- at client site
 - in-house
 - verbal
 - visual.
- Customer records*** may include:
- anniversaries and special dates
 - details of items bought or returned
 - name and contact details
 - personal preferences
 - transaction records.
- Customer loyalty schemes*** may include:
- credit or discount facilities
 - customer clubs
 - customer reward schemes
 - special offers.

Unit Sector(s)

Cross-Sector

Competency Field

Sales

SIRXSL304 Coordinate sales performance

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXSL003A Coordinate sales performance.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to implement and monitor store policies and procedures and relevant legislation in relation to sales transactions, and to provide feedback to management and staff on sales performance in relation to sales targets and planning.

Application of the Unit

This unit applies to staff with managerial responsibility required to monitor store policies and procedures, and provide feedback to management in relation to sales targets and planning.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Implement sales policies and procedures.	<p>1.1. Implement and monitor adherence to <i>store policy and procedures</i> and <i>relevant legislation</i> in regard to <i>selling</i>.</p> <p>1.2. Implement and monitor store policy and procedures in regard to <i>sales transactions</i>.</p> <p>1.3. Monitor <i>team</i> to ensure information is entered into point-of-sale equipment accurately.</p> <p>1.4. Monitor team to ensure the efficient and safe <i>handling</i> of goods through point-of-sale areas.</p> <p>1.5. Monitor team to ensure that products and services are matched to <i>customer</i> needs.</p>
2. Provide feedback and coaching to improve implementation of sales policies and procedures.	<p>2.1. Provide individual information and coach sales team members in store policy and procedures and relevant legislation in regard to selling.</p> <p>2.2. Provide individual information and coach sales team members on the implementation of store policy and procedures in regard to sales transactions.</p> <p>2.3. Provide support to team members to promote sales and service techniques.</p>
3. Monitor achievement of sales targets.	<p>3.1. Monitor and record individual and department sales targets according to store policy.</p> <p>3.2. Monitor and record store sales results in line with sales targets and according to store policy.</p> <p>3.3. Provide <i>feedback</i> to management and staff on sales performance in relation to sales targets and planning.</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:
 - ask questions to identify and confirm requirements
 - give instructions
 - provide feedback, coaching and performance analysis through clear and direct communication
 - share information
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
- literacy and numeracy skills to:
 - analyse store, department and individual sales figures
 - process and record information
 - read store policy and procedures

Required knowledge

- customer profiles
- factors that enhance sales performance
- location of store departments and importance of sales to store performance
- pricing procedures, including GST requirements
- principles and techniques of interpersonal communication
- relevant industry codes of practice
- relevant legislation and statutory requirements, including:
 - work health and safety (WHS) requirements
 - sustainability requirements
- stock control procedures
- store and department sales targets
- store merchandise and services
- store policies and procedures in regard to:
 - allocated duties and responsibilities
 - efficient use of resources
 - internal and external customer contact
 - selling products and services

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and

Evidence of the following is essential:

- applies store policies and procedures and industry codes of

- evidence required to demonstrate competency in this unit**
- practice in regard to customer service and selling products and services
 - implements and monitors store policies and procedures in relation to sales transactions, including non-cash sales and variations to standard sales transactions
 - provides information and coaching to sales team members to improve sales policy implementation
 - monitors and provides feedback to management and staff on sales performance in relation to sales targets and planning.

Context of and specific resources for assessment Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
 - policy and procedures manuals
 - individual and department sales targets and results
 - reporting proforma
 - legislation and statutory requirements
- a sales team
- point-of-sale equipment and materials.

Method of assessment A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the candidate in the workplace
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

- Store policy and procedures*** in regard to:
- allocated duties and responsibilities
 - efficient use of resources
 - internal and external customer contact
 - reporting

- Relevant legislation** may include:
- sales transactions
 - selling products and services.
 - environmental and sustainability legislation
 - industry codes of practice
 - liquor laws
 - lottery legislation
 - WHS
 - pricing procedures, including GST requirements
 - sale of second-hand goods
 - sale of X and R-rated products
 - tobacco laws
 - Australian consumer law and fair trading Acts
 - trading hours
 - transport, storage and handling of goods.
- Selling** may include:
- face-to-face
 - internet
 - telephone.
- Sales transactions** may include:
- cash
 - cheque
 - credit card
 - EFTPOS
 - gift voucher
 - lay-by
 - store card.
- Team** may include:
- full-time, part-time, casual or contract staff
 - people from a range of cultural, social and ethnic
 - people with varying degrees of language and literacy.
- Handling** techniques may vary according to:
- industry codes of practice
 - WHS
 - stock characteristics.
- Customers** may include:
- customers with routine or special requests
 - internal or external contacts
 - new or repeat contacts
 - people from a range of social, cultural and ethnic backgrounds
 - people with varying physical and mental abilities.
- Feedback** to management and staff may include:
- business documents
 - email
 - financial reports
 - informal meetings
 - presentations

- records of store sales
- reports.

Unit Sector(s)

Cross-Sector

Competency field

Sales

SIRXSL406 Manage sales and service delivery

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXSL005A Manage sales and service delivery.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to monitor, maintain and improve sales and service delivery. It involves market research, developing new markets, and marketing products and services within the culture of the overall store policy.

The unit requires the team member to develop and maintain excellence in sales and service delivery by ensuring the provision of a well-resourced working environment for fellow staff. The team member is required to proactively pursue the continuous improvement of operations by seeking, evaluating and reporting feedback from customers and colleagues on sales and service delivery and working conditions; and locating and negotiating adequate supply of stock and other necessary resources according to store policy.

Application of the Unit

This unit applies to staff with managerial responsibility.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Establish and respond to customer requirements.	<p>1.1. Plan and develop strategies to enhance provision of customer service according to store policy.</p> <p>1.2. Research and <i>analyse customer needs</i> in regard to local geographic and cultural issues.</p> <p>1.3. Resolve <i>customer</i> complaints referred by <i>staff</i>, according to store policy.</p> <p>1.4. Monitor sales and service targets and plans to ensure that customer requirements are met, and take appropriate remedial action if required.</p> <p>1.5. Encourage staff to take responsibility for meeting customer requirements.</p> <p>1.6. Seek and use feedback from customers to improve future operations.</p>
2. Monitor, maintain and improve sales and service delivery.	<p>2.1. Implement, communicate and review <i>policies and procedures for sales and service delivery</i> on a regular basis.</p> <p>2.2. Maintain adequate <i>resource</i> allocation for client service provision in line with <i>store policy and procedures</i>.</p> <p>2.3. Ensure sales and service targets and plans are consistent with quality and functional <i>specifications</i>.</p> <p>2.4. Communicate sales and service targets and plans to <i>relevant personnel</i> according to implementation schedules.</p> <p>2.5. Provide <i>feedback</i> to staff on operations and outcomes.</p> <p>2.6. Take corrective measures to minimise <i>factors that may cause disruption to operations</i>.</p> <p>2.7. Monitor and evaluate effectiveness of corrective actions for future operational planning.</p> <p>2.8. Ensure current and accurate <i>records</i> on sales are available to authorised personnel.</p>

- 2.9. Interpret and act on relevant reports as required.
3. Negotiate supply of goods.
- 3.1. *Negotiate* and implement *arrangements with suppliers*, according to store policies and procedures, and communicate to relevant personnel.
- 3.2. Authorise and communicate special pricing arrangements and customer payment agreements to relevant staff and management personnel according to store policy.
- 3.3. Monitor records of suppliers and stock for accuracy and legibility and take appropriate action where necessary.
- 3.4. Identify and communicate market factors affecting *supply* to relevant personnel.
- 3.5. Convey complete and accurate records of negotiations and agreements to appropriate personnel within designated time limits.
- 3.6. Take immediate corrective action where potential or actual *problems with supply* are indicated.
- 3.7. Identify and develop new suppliers to maintain and improve sales and service delivery.
4. Provide productive work environment.
- 4.1. Establish and maintain a sufficient supply of resources of the necessary quantity and quality to meet customer requirements.
- 4.2. Regulate and monitor access to and use of resources for maximum efficiency and sustainability.
- 4.3. Maintain staff working conditions to meet requirements of *relevant legislation* and store policy.
- 4.4. Ensure that maintenance frequency and use of equipment conform to recommended schedules and procedures.
- 4.5. Replace, repair or adapt resources that do not meet requirements as soon as practicable and with minimum disruption to work activity.
- 4.6. Communicate *recommendations* for improving conditions to relevant personnel within designated timeframe.
- 4.7. Maintain complete, accurate records and make them available to authorised personnel.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:
 - ask questions to identify and confirm requirements
 - communicate with staff through clear and direct communication
 - negotiate with suppliers and customers
 - present information
 - share information
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
- literacy and numeracy skills to:
 - calculate costs and pricing arrangements
 - document results
 - estimate volume
 - interpret and maintain data
 - prepare reports
 - research, analyse and interpret a broad range of written material
- technical skills to use new technology

Required knowledge

- customer demand and market trends
- principles and techniques for:
 - interpersonal communication
 - purchasing and supply specifications
 - stock control
- product quality standards
- range and availability of new products and services, especially those with enhanced sustainability features
- relevant industry codes of practice applicable to the sales environment
- relevant legislation and statutory requirements, including work health and safety (WHS) requirements applicable to the sales environment
- store merchandise and service range
- store merchandising plan
- store policies and procedures in regard to:
 - efficient and sustainable use of resources
 - pricing procedures, including GST requirements
 - quality assurance and control
 - sales and service delivery
 - stock maintenance and control
 - supply specifications

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- maintains, monitors and evaluates sales and service delivery
- communicates sales and service targets and plans and provides feedback on operations and outcomes to relevant personnel according to store policy
- proactively improves sales and service delivery operations
- interprets and maintains data on sales and services delivery
- negotiates and arranges supply of goods according to store policy and procedures
- authorises pricing and payment agreements according to store policy and procedures
- maintains, monitors and evaluates supply of stock.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
 - policy and procedures manuals
 - sales and service delivery targets and plans
 - records of sales and service
 - legislation and statutory requirements
 - industry codes of practice
 - WHS legislation and codes of practice
- suppliers
- a team.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the candidate in the workplace
- customer feedback
- research report
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Methods used to ***analyse customer needs*** may be:

- qualitative
- quantitative.

Customer may include:

- customers with routine or special requests
- internal and external contacts
- new or repeat contacts
- people from a range of social, cultural and ethnic backgrounds
- people with varying physical and mental abilities.

Staff may include:

- full-time, part-time, casual or contract staff
- people from a range of social, cultural and ethnic backgrounds
- people with varying degrees of language and literacy levels.

Policies and procedures for sales and service delivery may involve:

- customer complaints
- customer service and sales training
- service standards
- staff induction
- staff presentation.

Resource may include:

- equipment and technology
- finances
- materials
- people
- time.

Store policy and procedures in regard to:

- interaction with customers
- interaction with other team members
- WHS
- quality assurance and control
- acquisition and sale of products and services.

Specifications may include:

- customer agreements
- operational means for meeting agreements
- specific functional duties within the organisation.

Relevant personnel may

- managers

- include:
- members of own or other work teams
 - supervisors.
- Feedback** may be sought and given:
- in groups
 - in writing
 - individually
 - verbally.
- Factors that may cause disruption to operations** may include:
- operational resources
 - quality of materials
 - supply.
- Records** may be:
- electronic
 - hard copy.
- Techniques used to **negotiate** with suppliers may include:
- correspondence
 - email
 - face-to-face contact
 - meetings
 - telephone.
- Arrangements with suppliers** may relate to:
- credit levels
 - delivery
 - partnerships and exclusivity
 - pricing.
- Sources of **supply** may include:
- external organisations
 - internal departments and teams
 - internal and external personnel.
- Problems with supply** may involve:
- cost
 - coverage or content
 - quality
 - quantity
 - time schedules or scales.
- Relevant legislation** may include:
- equal employment opportunity and anti-discrimination laws
 - federal, state and local legislation
 - WHS.
- Recommendations** may be communicated to:
- colleagues, specialists, staff from other departments
 - external organisations with a health, safety or environmental responsibility
 - government bodies
 - higher-level managers
 - subordinates.

Unit Sector(s)

Cross Sector

Competency Field

Sales

SIRXWHS302 Maintain store safety

Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXOHS002A Maintain store safety.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to maintain store safety in a retail environment.

It involves informing and involving team members with regard to work health and safety (WHS), monitoring and maintaining a safe work environment, implementing emergency procedures, identifying the need for WHS training, and maintaining WHS records. It is based on the National Occupational Health and Safety Commission (NOHSC) guidelines.

Application of the Unit

This unit applies to store managers and team leaders.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element

Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- | | |
|---|---|
| <p>1. Inform team members about WHS matters.</p> | <p>1.1. Clearly and accurately explain store policy and procedures in regard to WHS and <i>emergency procedures to team members</i>.</p> <p>1.2. Ensure access for team members to store <i>WHS policy and procedures</i>.</p> <p>1.3. Clearly and accurately explain relevant provisions of WHS legislation and codes of practice to team members.</p> <p>1.4. Regularly provide clear and accurate information on identified <i>hazards</i> and risk control procedures to team members.</p> <p>1.5. Model the implementation of WHS and emergency procedures to reinforce information.</p> |
| <p>2. Involve team members in WHS matters.</p> | <p>2.1. Provide <i>opportunities and processes for team members to consult and contribute</i> on WHS issues according to store policy.</p> <p>2.2. Promptly resolve issues raised or refer to relevant personnel according to store policy.</p> <p>2.3. Promptly convey outcomes of issues raised on WHS matters to team members.</p> |
| <p>3. Monitor and maintain a safe work environment.</p> | <p>3.1. Implement store policy and procedures with regard to identifying, preventing and reporting potential hazards.</p> <p>3.2. Take prompt action to deal with hazardous events according to store policy.</p> <p>3.3. Investigate unsafe or hazardous events, identify cause, and report inadequacies in risk control measures or <i>resource allocation</i> for risk control to <i>relevant personnel</i>.</p> <p>3.4. Implement and monitor control measures to prevent recurrence and minimise risks of unsafe and hazardous events according to store policy and <i>hierarchy of control</i>.</p> <p>3.5. Handle and store <i>hazardous goods</i> according to store policy and WHS regulations.</p> <p>3.6. Maintain <i>equipment</i> according to store policy and WHS regulations.</p> <p>3.7. Monitor team performance to ensure use of <i>safe manual handling techniques</i>.</p> |

- 3.8. Implement *store emergency policy and procedures* promptly in the event of an emergency.
4. Identify need for WHS training.
- 4.1. Identify WHS training needs, specifying gaps between WHS competencies required and those held by team members.
- 4.2. Organise and arrange *training* according to store policy.
5. Maintain WHS records.
- 5.1. Complete and maintain WHS *records* regarding occupational injury and disease according to store policy and *legislative requirements*.
- 5.2. Use information from records to identify hazards and monitor risk control procedures according to store policy.

Required Skills and Knowledge

this section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to:
 - provide information, coaching and feedback to team members
 - involve team members
 - refer issues to appropriate personnel through clear and direct communication
 - motivate and lead a team
 - use and interpret non-verbal communication
- literacy and numeracy skills to:
 - generate reports
 - interpret and apply WHS regulations
 - interpret symbols used for WHS signage
 - read store policy and procedures
- technical skills to:
 - identify broken or damaged equipment
 - identify hazardous goods and substances
 - locate and use safety alarms, fire extinguishers and emergency exits

Required knowledge

- hierarchy of risk control:
 - elimination of hazards
 - engineering controls to reduce risk
 - administrative controls
 - use of personal protective equipment

- job role and responsibilities
- location of nearest first aid assistant or facility
- manual handling and safe lifting techniques
- possible fire and safety hazards
- principles and techniques in interpersonal communication
- relevant WHS legislation and codes of practice
- sickness and accident procedures
- store policies and procedures in regard to:
 - manual handling
 - WHS emergency procedures
 - unsafe or hazardous goods
 - handling and storage
 - disposal
 - bomb threat procedures
 - store evacuation

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- applies and monitors store policy, industry codes of practice, relevant legislation and statutory requirements in regard to WHS and emergency procedures
- applies and monitors safe work practices in the handling and moving of stock, according to WHS legislation and codes of practice
- interprets and monitors the implementation of manufacturer instructions with regard to handling stock and using relevant equipment
- applies and monitors safe work practices in the handling, storage and disposal of unsafe or hazardous materials
- identifies WHS training needs and maintains WHS records.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant equipment, such as:
 - stock moving equipment
 - alarm systems

- first aid equipment
- firefighting equipment
- communication equipment
- relevant documentation, such as:
 - WHS legislation
 - store evacuation procedures
 - store policy and procedures manuals
 - incident reporting forms.

Method of assessment A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- role play
- third-party reports from a supervisor
- customer feedback
- written or verbal questioning to assess knowledge and understanding.

Guidance information for assessment Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXRSK002A Maintain store security.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

Emergency procedures may relate to:

- accidents
- bomb threats
- cyclones
- dealing with dangerous customers
- fire
- flooding
- product recall and contamination
- sickness
- store evacuation involving staff or customers.

Team members may include:

- full-time, part-time, casual or contract
- new or existing staff

WHS policy and procedures may relate to:

- people from a range of cultural, social and ethnic backgrounds
- people with varying levels of language and literacy.
- basic safety procedures
- customers
- dangerous goods
- emergency procedures
- equipment and tools
- issue-resolution procedures
- premises
- reporting procedures
- safe manual handling and lifting
- staff
- stock.

Hazards may include:

- broken or damaged equipment
- chemical spills
- damaged packing material or containers
- electricity and water
- fires
- manual handling
- sharp cutting tools and instruments
- stress
- unguarded equipment.

Opportunities and processes for team members to consult and contribute may include:

- identification of health and safety representatives
- WHS meetings
- staff meetings
- suggestions from staff for improving existing tasks and procedures.

Resource allocation may include:

- equipment and technology
- finances
- materials
- people
- time.

Relevant personnel may include:

- manager
- safety representative
- supervisor
- team leader.

Hierarchy of control may include:

- appropriate use of personal protective clothing and equipment
- eliminating hazards
- isolating hazards
- substitution
- using administrative controls
- using engineering controls.

- Hazardous goods*** may include:
- chemicals
 - electrical equipment
 - flammable goods
 - waste.
- Equipment*** may include:
- computers
 - EFTPOS terminals
 - equipment for carrying or moving merchandise
 - equipment for storage of merchandise, including refrigerators
 - point of sale terminals
 - printers
 - security tag systems
 - thermometers
 - trolley return equipment
 - weighing machines
 - wrapping and packing equipment, such as shrink wrapping.
- Safe manual handling techniques*** may include:
- job procedures
 - lifting or shifting practices
 - using equipment, such as ladders and trolleys.
- Store emergency policy and procedures*** may relate to:
- alarm systems and procedures
 - events likely to endanger staff, contractors, customers or visitors
 - firefighting procedures
 - medical attention procedures
 - product recall and contamination
 - store evacuation procedures for staff and customers
 - transport arrangements for sick or injured persons.
- Training*** may include:
- emergency procedures
 - evacuation procedures
 - first aid
 - manual handling techniques
 - reporting procedures
 - stress management.
- Records*** may include:
- centralised
 - departmental
 - electronic
 - manual.
- Legislative requirements*** may include:
- federal, state or territory and local legislation
 - WHS regulations
 - privacy legislation
 - workers' compensation regulations.

Unit Sector(s)

Cross-Sector

Competency Field

Work Health and Safety

SITTPPD402 Develop interpretive activities

Modification History

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

Version	Comments
1.0	E Replaces and is equivalent to SITTPPD005A Plan and develop interpretive activities. Title simplified.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop interpretive activities for different customer groups. It requires the ability to establish educational, interpretive and commercial objectives, develop operational aspects and evaluate the success of the activity. The actual presentation of activities is covered in the unit SITTGDE304 Prepare and present tour commentaries or activities.

Application of the Unit

This unit applies to many industry sectors and has particular relevance in tourism, sport and recreation and cultural contexts. Interpretive activities take place on historical, cultural, heritage or nature-based tours, in attractions and theme parks, in national parks or in locations such as museums, galleries, libraries, performing arts centres and zoos. Activities could be virtual.

Planning and development of interpretive activities may be for a series of activities within a venue or tour operation or for a one-off activity. It could be the responsibility of the person delivering the activity or be developed by senior operational or supervisory personnel. The planning role applies to those who work independently with limited guidance from others. This could include senior guides, activities coordinators, or owner-operators of small organisations.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- | | |
|-----------------------------------|---|
| 1. Establish need for activities. | 1.1 Identify need for <i>interpretive activities</i> , based on customer, organisation and community needs. |
| | 1.2 Establish educational, interpretive and commercial objectives in consultation with appropriate colleagues. |
| 2. Create activities. | 2.1 Identify and evaluate a range of potential information and <i>resources</i> , including <i>other specialists</i> as required. |
| | 2.2 Develop interpretive framework for activities. |
| | 2.3 Generate and select ideas for potential messages, themes and storylines. |
| | 2.4 Consider relationships between themes, storylines and the site. |
| | 2.5 Incorporate interpretive media that matches the site. |
| | 2.6 Conduct a risk assessment and incorporate controls into activity development. |
| | 2.7 Evaluate and integrate legal, ethical and sustainability considerations. |
| | 2.8 Develop resources to support activities. |
| | 2.9 Develop activity within budget to meet agreed objectives. |
| | 2.10 Promote activities according to organisational marketing objectives. |
| 3. Evaluate activities. | 3.1 Obtain formal and informal feedback from customers and colleagues during piloting or conduct of activities. |
| | 3.2 Modify activities according to feedback received. |
| | 3.3 Establish and implement ongoing review mechanisms to ensure continuous improvement of activities in line with its objectives. |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to consult with colleagues about development issues for interpretive activities
- critical thinking skills and research skills to evaluate wide ranging information and tease out creative themes and messages for activities
- literacy skills to:
 - analyse complex information and to interpret this for creative communication to customers
 - develop resources and information materials for the activities
- numeracy skills to calculate costs and work within established budgets
- planning and organising skills to coordinate creative and practical aspects of activities
- problem-solving skills to evaluate and adjust activities.

Required knowledge

- subject matter around which activities are developed
- principles of interpretation, including work of Freeman Tilden
- physical and digital interpretive media
- practical processes that support activity development, including:
 - budgeting
 - evaluation
 - needs analysis
 - resource development
 - scheduling
- creative communication techniques for interpretive activities, including:
 - games
 - illustrated talks
 - role-playing
 - sensory awareness exercises
 - storytelling
 - use of apps, podcasts, near response codes, quick response codes
- safety requirements specific to activities
- risk assessment processes, including:
 - determining overall risk level
 - determining the exposure to the risk
 - estimating the probability of negative impacts
 - identifying the consequences that could result from the identified risk
- legal, ethical and sustainability considerations for activity development, including:

- cultural appropriateness
- duty of care
- minimal impact
- minimising waste and conserving resources.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- plan and develop multiple interpretive activities with varying themes and messages that meet the needs of different customer groups and commercial and operational constraints
- apply subject matter knowledge to the development of interpretive activities
- plan and develop interpretive activities for a number of different delivery environments.

Context of and specific resources for assessment

Assessment must ensure use of:

- a real or simulated environment for which interpretive activities can be planned and developed.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- evaluation of a project undertaken by the individual to develop and evaluate activities for a nominated customer group or organisation
- evaluation of activities by professional interpretation organisations
- written or oral questioning to assess knowledge of interpretation principles and activity development processes
- use of case studies to assess ability to tailor activities and information to suit particular customer needs
- review of portfolios of evidence and third-party workplace reports of on-the-job performance by the individual.

Guidance information for assessment

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITTGDE304 Prepare and present tour commentaries or activities
- SITTGDE306 Research and share general information on Australian Indigenous culture
- SITTGDE307 Prepare specialised interpretive content on flora, fauna and landscape
- SITTGDE308 Prepare specialised interpretive content on marine environments
- SITTGDE309 Prepare specialised interpretive content on cultural and heritage environments.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Interpretive activities:

- may include:
 - guided site activities
 - guided walks
 - one or more activities that may be combined in an overall tour program
 - sporting activities
 - touring activities
 - virtual activities
- may relate to a range of subjects, including:
 - art
 - birds
 - built environment
 - culture
 - domestic and farm animals
 - festivals or seasonal themes
 - history and heritage
 - natural environment
 - sports

- wildlife.
- Resources** may include:
- actors and performers
 - apps and other digital content
 - costumes
 - guest speakers
 - handouts
 - information and communications technology
 - natural resources
 - props
 - professional organisations
 - special interest organisations.
- Other specialists** may include:
- actors and performers
 - creative designers
 - cultural advisers
 - designers
 - environmental educators
 - heritage specialists
 - historians
 - interpretation consultants
 - marketers
 - subject matter experts
 - technical experts.

Unit Sector(s)

Tourism

Competency Field

Planning and Product Development

TAEASS401B Plan assessment activities and processes

Modification History

Version	Comments
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TAEASS301B	Released with <i>TAE10 Training and Education Training Package version 2.0</i>
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Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to plan and organise the assessment process, including recognition of prior learning (RPL), in a competency-based assessment system. It also includes the development of simple assessment instruments.

Application of the Unit

This unit typically applies to assessors and workplace supervisors with assessment planning responsibilities; and trainers or other assessors responsible for planning assessment, including RPL.

The unit is suitable for those with an existing assessment strategy which documents the overall framework for assessment.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
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Elements describe the essential outcomes of a

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text

ELEMENT

unit of competency.

PERFORMANCE CRITERIA

is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1. Determine assessment approach	<p>1.1 Identify candidate and confirm <i>purposes and context of assessment/RPL</i> with relevant people according to <i>legal, organisational and ethical requirements</i></p> <p>1.2 Identify and access <i>benchmarks for assessment/RPL</i> and any specific assessment guidelines</p>
2. Prepare the assessment plan	<p>2.1 Determine evidence and <i>types of evidence</i> needed to demonstrate competence, according to the <i>rules of evidence</i></p> <p>2.2 Select <i>assessment methods</i> which will support the collection of defined evidence, taking into account the context in which the assessment will take place</p> <p>2.3 Document all aspects of the <i>assessment plan</i> and confirm with relevant personnel</p>
3. Develop assessment instruments	<p>3.1 Develop <i>simple assessment instruments</i> to meet target group needs</p> <p>3.2 Analyse <i>available assessment instruments</i> for their suitability for use and modify as required</p> <p>3.3 <i>Map assessment</i> instruments against unit or course requirements</p> <p>3.4 Write clear instructions for candidate about the use of the instruments</p> <p>3.5 Trial draft assessment instruments to validate content and applicability, and record outcomes</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- cognitive interpretation skills to:
 - interpret competency standards and other assessment documentation, including material

- relating to reasonable adjustment
- identify opportunities for integrated competency assessment
- contextualise competency standards to the operating assessment environment, including RPL
- consider access and equity needs of diverse candidates
- technology skills to use appropriate equipment and software to communicate effectively with others
- research and evaluation skills to:
 - obtain competency standards, assessment tools and other relevant assessment resources
 - research candidate characteristics and any reasonable adjustment needs
 - evaluate feedback, and determine and implement improvements to processes
- literacy skills to read and interpret relevant information to design and facilitate assessment and recognition processes
- communication skills to discuss assessment, including RPL processes with clients and other assessors
- interpersonal skills to:
 - demonstrate sensitivity to access and equity considerations and candidate diversity
 - promote and implement equity, fairness, validity, reliability and flexibility in planning an assessment processes.
- **Required knowledge**
- ethical and legal requirements of an assessor
- competency-based assessment, including:
 - work focused
 - criterion referenced
 - standards based
 - evidence based
- different purposes of assessment and different assessment contexts, including RPL
- how to read and interpret the identified competency standards as the benchmarks for assessment
- how to contextualise competency standards within relevant guidelines
- four principles of assessment and how they guide the assessment process
- purpose and features of evidence, and different types of evidence used in competency-based assessments, including RPL
- rules of evidence and how they guide evidence collection
- different types of assessment methods, including suitability for collecting various types of evidence
- assessment instruments and their purpose; different types of instruments; relevance of different instruments for specific evidence-gathering opportunities.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Evidence of the ability to: • plan and organise the assessment process on a minimum of two occasions • collect evidence that demonstrates: <ul style="list-style-type: none"> • documented assessment plans • having covered a range of assessment events • catering for a number of candidates • different competency standards or accredited curricula • an RPL assessment • contextualisation of competency standards and the selected assessment tools, where required • incorporation of reasonable adjustment strategies • development of simple assessment instruments for use in the process • organisational arrangements.
Context of and specific resources for assessment	<p>Evidence must be gathered in the workplace wherever possible. Where no workplace is available, a simulated workplace must be provided.</p> <p>Assessment must ensure access to training products, such as training packages and accredited course documentation.</p>
Method of assessment	
Guidance information for assessment	

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Purposes of assessment/ RPL</i> may include:</p>	<ul style="list-style-type: none"> • recognising current existing competence of candidates • determining if competence has been achieved following learning • establishing candidate progress towards achievement of competence • determining language, literacy and numeracy needs of candidates • certifying competence through a qualification or Statement of Attainment • licensing or regulatory requirements.
<p><i>Context of assessment/ RPL</i> may include:</p>	<ul style="list-style-type: none"> • environment in which the assessment/RPL will be carried out, including real or simulated workplace • opportunities for collecting evidence in a number of situations • relationships between competency standards and: <ul style="list-style-type: none"> • evidence to support RPL • work activities in the candidate's workplace • learning activities • who carries out the assessment/RPL.
<p><i>Organisational, legal and ethical requirements</i> may include:</p>	<ul style="list-style-type: none"> • assessment system policies and procedures • assessment strategy requirements • reporting, recording and retrieval systems for assessment, including RPL • quality assurance systems • business and performance plans • access and equity policies and procedures • collaborative and partnership arrangements • defined resource parameters • mutual recognition arrangements • industrial relations systems and processes, awards, and enterprise agreements • Australian Quality Training Framework • registration scope • human resources policies and procedures • legal requirements, including: <ul style="list-style-type: none"> • anti-discrimination • equal employment opportunity • job role, responsibilities and conditions • relevant industry codes of practice • confidentiality and privacy requirements • OHS considerations, including: <ul style="list-style-type: none"> • ensuring OHS requirements are adhered to during the

	<p>assessment process</p> <ul style="list-style-type: none"> identifying and reporting OHS hazards and concerns to relevant personnel.
Benchmarks for assessment/RPL may include:	<ul style="list-style-type: none"> criterion against which the candidate is assessed or prior learning recognised, which may be: <ul style="list-style-type: none"> competency standard/unit of competency assessment criteria of course curricula performance specifications of an enterprise or industry product specifications.
Types of evidence may include:	<ul style="list-style-type: none"> direct indirect supplementary.
Rules of evidence ensure that evidence collected is:	<ul style="list-style-type: none"> valid sufficient authentic current.
Assessment methods are the particular techniques used to gather evidence and may include:	<ul style="list-style-type: none"> direct observation, for example: <ul style="list-style-type: none"> real work/real time activities at the workplace work activities in a simulated workplace environment structured activities, for example: <ul style="list-style-type: none"> simulation exercises and role-plays projects presentations activity sheets questioning, for example: <ul style="list-style-type: none"> written questions, e.g. on a computer interviews self-assessment verbal questioning questionnaires oral or written examinations (applicable at higher AQF levels) portfolios of evidence, for example: <ul style="list-style-type: none"> collection of work samples compiled by candidate product with supporting documentation historical evidence journal or log book information about life experience review of products, for example: <ul style="list-style-type: none"> testimonials and reports from employers and supervisors

	<ul style="list-style-type: none"> evidence of training authenticated prior achievements interview with employer, supervisor, or peer.
<i>Assessment plan</i> may include:	<ul style="list-style-type: none"> overall planning document describing: <ul style="list-style-type: none"> what is to be assessed when assessment is to take place where assessment is to take place how assessment is to take place.
<i>Simple assessment instruments</i> may include:	<ul style="list-style-type: none"> instruments developed by an assessor as part of formative or summative assessment activities, including: <ul style="list-style-type: none"> profiles of acceptable performance measures templates and proformas specific questions or activities evidence and observation checklists checklists for the evaluation of work samples recognition portfolios candidate self-assessment materials instruments developed elsewhere that have been modified by the assessor for use with a particular client group.
<i>Available assessment instruments</i> may include:	<ul style="list-style-type: none"> commercially available instruments those created by others inside the registered training organisation.
<i>Map assessment</i> means:	<ul style="list-style-type: none"> showing a clear relationship between the evidence and the requirements of the unit.

Unit Sector(s)

Assessment

Custom Content Section

Not applicable.

TAEASS402B Assess competence

Modification History

Version	Comments
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TAEASS402B	Released with <i>TAE10 Training and Education Training Package version 2.0</i>
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Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to assess the competence of a candidate.

Application of the Unit

This unit typically applies to assessors.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT

Elements describe the essential outcomes of a unit of competency.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1. Prepare for assessment	<p>1.1 Interpret <i>assessment plan</i> and confirm organisational, legal and ethical requirements for conducting assessment with relevant people</p> <p>1.2 Access and interpret relevant <i>benchmarks for assessment</i> and nominated <i>assessment tools</i> to confirm the requirements for evidence to be collected</p> <p>1.3 Arrange identified material and physical resource requirements according to assessment system policies and procedures</p> <p>1.4 Organise <i>specialist support</i> required for assessment</p> <p>1.5 Explain, discuss and agree details of the assessment plan with candidate</p>
2. Gather quality evidence	<p>2.1 Use agreed <i>assessment methods</i> and instruments to gather, organise and document evidence in a format suitable for determining competence</p> <p>2.2 Apply the principles of assessment and rules of evidence in gathering quality evidence</p> <p>2.3 Determine opportunities for evidence gathering in actual or simulated activities through consultation with the candidate and relevant personnel</p> <p>2.4 Determine opportunities for integrated assessment activities and document any changes to assessment instruments where required</p>
3. Support the candidate	<p>3.1 Guide candidates in gathering their own evidence to support recognition of prior learning (RPL)</p> <p>3.2 Use appropriate communication and interpersonal skills to develop a professional relationship with the candidate that reflects sensitivity to <i>individual differences</i> and enables two-way <i>feedback</i></p> <p>3.3 Make decisions on reasonable adjustments with the candidate, based on candidate's needs and characteristics</p> <p>3.4 Access required specialist support in accordance with the assessment plan</p> <p>3.5 Address any OHS risk to person or equipment immediately</p>
4. Make the assessment decision	<p>4.1 Examine collected evidence and evaluate it to ensure that it reflects the evidence required to demonstrate competence</p> <p>4.2 Use judgement to infer whether competence has been demonstrated, based on the available evidence</p> <p>4.3 Make assessment decision in line with agreed assessment procedures and according to agreed assessment plan</p> <p>4.4 Provide clear and constructive feedback to candidate regarding</p>

	the assessment decision and develop any follow-up action plan required
5. Record and report the assessment decision	5.1 Record assessment outcomes promptly and accurately 5.2 Complete and process an assessment report according to agreed assessment procedures 5.3 Inform other relevant parties of the assessment decision according to confidentiality conventions
6. Review the assessment process	6.1 Review the assessment process in <i>consultation</i> with relevant people to improve own future practice 6.2 Document and record the review according to relevant assessment system policies and procedures

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analysis and interpretation skills to:
 - break down competency standards
 - interpret assessment tools and other assessment information, including those used in RPL
 - identify candidate needs
 - make judgements based on assessment of available evidence
- observation skills to:
 - recognise candidate's prior learning
 - determine candidate's performance
 - identify when candidate may need assistance during the assessment processes
- research and evaluation skills to:
 - access required human and material resources for assessment
 - access assessment system policies and procedures
 - access RPL policies and procedures
 - evaluate evidence
 - evaluate assessment process
- cognitive skills to:
 - weigh up the evidence and make a judgement
 - consider and recommend reasonable adjustments
- decision-making skills to:
 - recognise a candidate's prior learning

- make a decision on a candidate's competence
- literacy skills to:
 - read and interpret relevant information to conduct assessment
 - prepare required documentation and records or reports of assessment outcomes in required format
- communication and interpersonal skills to:
 - explain the assessment, including RPL process
 - give clear and precise instructions
 - ask effective questions
 - provide clarification
 - discuss process with other relevant people
 - give appropriate feedback
 - discuss assessment outcome
 - use language appropriate to candidate and assessment environment
 - establish a working relationship with candidate.

Required knowledge

- competency-based assessment, including:
 - vocational education and training as a competency-based system
 - criterion-referenced assessment as distinct from norm-referenced assessment
 - competency standards as the basis of qualifications
 - structure and application of competency standards
 - principles of assessment and how they are applied
 - rules of evidence and how they are applied
 - range of assessment purposes and assessment contexts, including RPL
 - different assessment methods, including suitability for gathering various types of evidence, suitability for content of units, and resource requirements and associated costs
 - reasonable adjustments and when they are applicable
 - types and forms of evidence, including assessment instruments that are relevant to gathering different types of evidence used in competency-based assessment, including RPL
 - potential barriers and processes relating to assessment tools and methods
 - assessment system, including policies and procedures established by the industry, organisation or training authority
- RPL policies and procedures established by the organisation
- cultural sensitivity and equity considerations
- relevant policy, legislation, codes of practice and national standards, including commonwealth and state or territory legislation that may affect training and assessment in the vocational education and training sector, such as:
 - copyright and privacy laws in terms of electronic technology
 - security of information

- plagiarism
- training packages and competency standards
- licensing requirements
- industry and workplace requirements
- duty of care under common law
- recording information and confidentiality requirements
- anti-discrimination, including equal employment opportunity, racial vilification and disability discrimination
- workplace relations
- industrial awards and enterprise agreements
- OHS responsibilities associated with assessing competence, such as:
 - requirements for reporting hazards and incidents
 - emergency procedures
 - procedures for use of relevant personal protective equipment
 - safe use and maintenance of relevant equipment
 - sources of OHS information.
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Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • assess competence of a number of candidates within the vocational education and training context against different units of competency or accredited curricula, following the relevant assessment plan • assess at least one candidate for RPL • consider reasonable adjustment and the reasons for decisions in at least one assessment • cover an entire unit of competency and show: <ul style="list-style-type: none"> • the application of different assessment methods and instruments involving a range of assessment activities and events • two-way communication and feedback • how judgement was exercised in making the assessment decision • how and when assessment outcomes were recorded and reported

	<ul style="list-style-type: none"> assessment records and reports completed in accordance with assessment system and organisational, legal and ethical requirements how the assessment process was reviewed.
Context of and specific resources for assessment	Evidence must be gathered in the workplace whenever possible. Where no workplace is available, a simulated workplace must be provided.
Method of assessment	
Guidance information for assessment	

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Assessment plan</i> may include:	<ul style="list-style-type: none"> overall planning, describing: <ul style="list-style-type: none"> what is to be assessed when assessment is to take place where assessment is to take place how assessment is to take place.
<i>Benchmarks for assessment:</i>	<ul style="list-style-type: none"> refer to a criterion against which the candidate is assessed may be a competency standard/unit of competency, assessment criteria of course curricula, performance specifications, or product specifications.
<i>Assessment tools</i> include:	<ul style="list-style-type: none"> the learning or competency unit(s) to be assessed the target group, context and conditions for the assessment the tasks to be administered to the candidate an outline of the evidence to be gathered from the candidate the evidence criteria used to judge the quality of performance (i.e. the assessment decision-making rules) the administration, recording and reporting requirements the evidence of how validity and reliability have been tested and built into the design and use of the tool.

<p><i>Specialist support</i> may include:</p>	<ul style="list-style-type: none"> • assistance by third party, such as carer or interpreter • support from specialist educator • provision of developed online assessment activities • support for remote or isolated candidates and assessors • support from subject matter or safety experts • advice from regulatory authorities • assessment teams and panels • support from lead assessors • advice from policy development experts.
<p><i>Assessment methods</i> include:</p>	<ul style="list-style-type: none"> • particular techniques used to gather different types of evidence, such as: <ul style="list-style-type: none"> • direct observation • structured activities • oral or written questioning • portfolios of evidence • review of products • third-party feedback.
<p><i>Individual differences</i> may include:</p>	<ul style="list-style-type: none"> • English language, literacy and numeracy barriers • physical impairment or disability • intellectual impairment or disability • medical condition that may impact on assessment, such as arthritis, epilepsy, diabetes and asthma • learning difficulties • mental or psychological disability • religious and spiritual observances • cultural images and perceptions • age • gender.
<p><i>Feedback</i> may include:</p>	<ul style="list-style-type: none"> • ensuring assessment/RPL process is understood • ensuring candidate concerns are addressed • enabling questions and answers • confirming outcomes • identifying further evidence to be provided • discussing action plans • confirming gap training needed • providing information regarding available appeal processes • suggesting improvements in evidence gathering and

	presentation.
<i>Consultation</i> may involve:	<ul style="list-style-type: none">• moderation with other assessors, or training and assessment coordinators• discussions with client, team leaders, managers, RPL coordinators, supervisors, coaches and mentors• technical and subject experts• English language, literacy and numeracy experts.

Unit Sector(s)

Assessment

Custom Content Section

Not applicable.

TAEASS403B Participate in assessment validation

Modification History

Version	Comments
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TAEASS403B	Released with TAE10 Training and Education Training Package version 2.0
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Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to participate in an assessment validation process.

Application of the Unit

This unit typically applies to those participating in assessment validation. It does not address leading the validation process.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
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Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1. Prepare for validation	<p>1.1 Discuss and confirm the approach to validation according to defined purposes, context, and relevant <i>assessment system policies and procedures</i></p> <p>1.2 Analyse relevant <i>benchmarks for assessment</i> and agree on the evidence needed to demonstrate competence</p> <p>1.3 Arrange <i>materials</i> for <i>validation activities</i></p>
2. Contribute to validation process	<p>2.1 Demonstrate active <i>participation</i> in validation sessions and activities using appropriate communication skills</p> <p>2.2 Participate in validation sessions and activities by applying the principles of assessment and rules of evidence</p> <p>2.3 Check all documents used in the validation process for accuracy and version control</p>
3. Contribute to validation outcomes	<p>3.1 Collectively discuss validation findings to support improvements in the quality of assessment</p> <p>3.2 Discuss, agree and record recommendations to improve assessment practice</p> <p>3.3 Implement changes to own assessment practice, arising from validation</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- planning skills to participate in validation activities within agreed timeframes
- problem-solving skills to identify information that is inconsistent, ambiguous or contradictory
- evaluation skills to:
 - determine evidence requirements from competency standards
 - review assessment process, tools and methods
 - review collected evidence
- communication skills to share information in validation meetings.

Required knowledge

- how to interpret competency standards and other related assessment information to determine the evidence needed to demonstrate competence, including:
 - criterion-referenced assessment as distinct from norm-referenced assessment

- various reasons for carrying out validation and the different approaches to validation that may be appropriate before, during and after assessment
- critical aspects of validation, including validation of assessment processes, methods and products
- relevant OHS legislation, codes of practice, standards and guidelines, impacting on assessment
- legal and ethical requirements of assessors, particularly in relation to validation activities
- principles of assessment
- rules of evidence.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • actively participate in a minimum of two validation sessions or meetings which, in combination, address the critical aspects of validation using different validation approaches and activities • clearly explain purposes of validation and the legal and ethical responsibilities of assessors • collate documentation relating to validation process in a logical manner • demonstrate communication and liaison with relevant people • provide feedback and interpret documentation in validation sessions • record contribution to validation findings.
Context of and specific resources for assessment	<p>Evidence must be gathered in the workplace wherever possible. Where no workplace is available, a simulated workplace must be provided.</p> <p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • assessment reports and records • other documentation relevant to validation.
Method of assessment	
Guidance information	

for assessment	
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Assessment system policies and procedures</i> may include:	<ul style="list-style-type: none"> • candidate selection • rationale and purpose of competency-based assessment • assessment records, and data and information management • recognition of current competency, recognition of prior learning and credit arrangements • assessment reporting procedures • assessment appeals • candidate grievances and complaints • validation • evaluation and internal audit • costs and resourcing • access and equity, and reasonable adjustment • partnership arrangements • links with human resource or industrial relations system • links with overall quality management system.
<i>Benchmarks for assessment:</i>	<ul style="list-style-type: none"> • refers to criterion against which the candidate is assessed • may be one or more units of competency or assessment criteria of course curricula.
<i>Materials</i> may include:	<ul style="list-style-type: none"> • assessment tools • samples of collected evidence • documentation outlining the basis of assessment decisions • reports and records of assessment decisions • samples of benchmarks of appropriate evidence • Assessment Guidelines of the relevant training packages • information from the evidence guide of the relevant units of competency.
<i>Validation activities</i> may include:	<ul style="list-style-type: none"> • analysing and reviewing: <ul style="list-style-type: none"> • assessment tools • collected evidence • assessment decisions and records of assessment outcomes

	<ul style="list-style-type: none"> • other aspects of assessment policies, processes and outcomes • recording evidence of validation processes and outcomes.
<i>Participation</i> may include comparison and evaluation of:	<ul style="list-style-type: none"> • assessment practices • assessment plans • interpretation of units of competency • assessment methods and instruments • assessment decisions • collected evidence.

Unit Sector(s)

Assessment

Custom Content Section

Not applicable.

TAEDEL301A Provide work skill instruction

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to conduct individual and group instruction and demonstrate work skills, using existing learning resources in a safe and comfortable learning environment. The unit covers the skills and knowledge required to determine the success of both the training provided and one's own personal training performance. It emphasises the training as being driven by the work process and context.
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Application of the Unit

Application of the unit	This unit supports a wide range of applications across any workplace setting and so can be used by any organisation. Its use is not restricted to training organisations.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Organise instruction and demonstration	1.1. Gather information about <i>learner characteristics</i> and learning needs 1.2. Confirm a <i>safe learning environment</i> 1.3. Gather and check <i>instruction and demonstration objectives</i> and seek assistance if required 1.4. Access and review relevant <i>learning resources</i> and <i>learning materials</i> for suitability and relevance, and seek assistance to interpret the contextual application 1.5. Organise access to necessary equipment or physical resources required for instruction and demonstration 1.6. Notify learners of <i>details</i> regarding the implementation of the learning program and/or delivery plan
2. Conduct instruction and demonstration	2.1. Use interpersonal skills with learners to establish a safe and comfortable learning environment 2.2. Follow the learning program and/or delivery plan to cover all learning objectives 2.3. Brief learners on any <i>OHS procedures</i> and requirements prior to and during training 2.4. Use <i>delivery techniques</i> to structure, pace and enhance learning 2.5. Apply <i>coaching</i> techniques to assist learning 2.6. Use communication skills to provide information,

ELEMENT	PERFORMANCE CRITERIA
	instruct learners and demonstrate relevant work skills 2.7. Provide opportunities for practice during instruction and through work activities 2.8. Provide and discuss feedback on learner performance to support learning
3. Check training performance	3.1. Use <i>measures</i> to ensure learners are acquiring and can use new technical and generic skills and knowledge 3.2. Monitor learner progress and outcomes in consultation with learner 3.3. Review relationship between the trainer/coach and the learner and adjust to suit learner needs
4. Review personal training performance and finalise documentation	4.1. Reflect upon personal performance in providing instruction and demonstration, and document strategies for improvement 4.2. Maintain, store and secure learner records according to organisational and legal requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- verbal and non-verbal communication techniques, such as:
 - asking relevant and appropriate questions
 - providing explanations
 - demonstrating
 - using listening skills
 - providing information clearly
- safety skills to implement OHS requirements, by acting and responding safely in order to:
 - identify hazards
 - conduct prestart-up checks if required
 - observe and interpret learner behaviour that may put people at risk
- time-management, skills to:

REQUIRED SKILLS AND KNOWLEDGE

- ensure all learning objectives are covered
- pace learning
- reflection skills in order to:
 - identify areas for improvement
 - maintain personal skill development
- literacy skills to:
 - complete and maintain documentation
 - read and follow learning programs and plans
 - read and analyse learner information
- technology skills to operate audio-visual and technical equipment
- interpersonal skills to:
 - engage, motivate and connect with learners
 - provide constructive feedback
 - maintain appropriate relationships
 - establish trust
 - use appropriate body language
 - maintain humour
 - demonstrate tolerance
 - manage a group
 - recognise and be sensitive to individual difference and diversity
- observation skills to:
 - monitor learner acquisition of new skills, knowledge and competency requirements
 - assess learner communication and skills in interacting with others
 - identify learner concerns
 - recognise learner readiness to take on new skills and tasks

Required knowledge

- learner characteristics and needs
- content and requirements of the relevant learning program and/or delivery plan
- sources and availability of relevant learning resources and learning materials
- content of learning resources and learning materials
- training techniques that enhance learning and when to use them
- introductory knowledge of learning principles and learning styles
- key OHS issues in the learning environment, including:
 - roles and responsibilities of key personnel
 - responsibilities of learners
 - relevant policies and procedures, including hazard identification, risk assessment, reporting requirements, safe use of equipment and emergency

REQUIRED SKILLS AND KNOWLEDGE

procedures

- risk controls for the specific learning environment

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment must address the scope of this unit and reflect all components of the unit. A range of appropriate assessment methods and evidence-gathering techniques must be used to determine competency. A judgement of competency should only be made when the assessor is confident that the required outcomes of the unit have been achieved and that consistent performance has been demonstrated.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- carry out a minimum of three training sessions, involving demonstrating and instructing particular work skills for different groups; with each session addressing:
 - different learning objectives
 - a range of techniques and effective communication skills appropriate to the audience.

Context of and specific resources for assessment

Evidence must be gathered in the workplace wherever possible. Where no workplace is available, a simulated workplace must be provided.

Method of assessment**Guidance information for assessment**

For further information about assessment of this and other TAE units, refer to relevant implementation guidance published on the IBSA website (www.ibsa.org.au).

Range Statement**RANGE STATEMENT**

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Learner characteristics</i> may include:	<ul style="list-style-type: none"> • language, literacy and numeracy levels • learning styles • past learning and work experiences • specific needs • workplace culture.
<i>Safe learning environment</i> may include:	<ul style="list-style-type: none"> • exit requirements • personal protective equipment • safe access • safe use of equipment.
<i>Instruction and demonstration objectives</i> may include:	<ul style="list-style-type: none"> • competencies to be achieved • generic and technical skills, which may be: <ul style="list-style-type: none"> • provided by the organisation • developed by a colleague • individual or group objectives • learning outcomes.
<i>Learning resources</i> may include:	<ul style="list-style-type: none"> • any material used to support learning, such as: <ul style="list-style-type: none"> • learner and user guides • trainer and facilitator guides • example training programs • specific case studies • professional development materials • assessment materials • a variety of formats • those produced locally • those acquired from other sources.
<i>Learning materials</i> may include:	<ul style="list-style-type: none"> • handouts for learners • materials sourced from the workplace, e.g. workplace documentation, operating procedures, and specifications.
<i>Details</i> may include:	<ul style="list-style-type: none"> • location and time • outcomes of instruction or demonstration • reason for instruction or demonstration • who will be attending instruction session.

RANGE STATEMENT	
<i>OHS procedures</i> may include:	<ul style="list-style-type: none"> • emergency procedures • hazards and their means of control • incident reporting • use of personal protective equipment • safe work practices • safety briefings • site-specific safety rules.
<i>Delivery techniques</i> may include:	<ul style="list-style-type: none"> • coaching • demonstration • explanation • group or pair work • providing opportunities to practise skills and solve problems • questions and answers.
<i>Coaching</i> may include:	<ul style="list-style-type: none"> • learning arrangements requiring immediate interaction and feedback • on-the-job instruction and 'buddy' systems • relationships targeting enhanced performance • short-term learning arrangements • working on a one-to-one basis.
<i>Measures</i> may include:	<ul style="list-style-type: none"> • informal review or discussion • learner survey • on-the-job observation • review of peer coaching arrangements.

Unit Sector(s)

Unit sector	Delivery and facilitation
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

TAEDEL401A Plan, organise and deliver group-based learning

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to plan, organise and deliver training for individuals within a group.
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Application of the Unit

Application of the unit	This unit typically applies to a person working as an entry-level trainer, teacher or facilitator in or with a training and assessment organisation. The person will be working from a learning program developed by someone else, and structuring the learning around that program.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Interpret learning environment and delivery requirements	1.1. Access, read and interpret <i>learning program documentation</i> to determine delivery requirements 1.2. Use available information and documentation to identify group and individual learner needs and learner characteristics 1.3. Identify and assess constraints and risks to delivery 1.4. Confirm personal role and responsibilities in planning and delivering training with relevant personnel
2. Prepare session plans	2.1. Refine existing learning objectives according to program requirements and specific needs of individual learners 2.2. Develop <i>session plans</i> and document these for each segment of the learning program 2.3. Use knowledge of learning principles and theories to generate ideas for managing session delivery
3. Prepare resources for delivery	3.1. Contextualise existing learning materials to meet the needs of the specific learner group 3.2. Finalise learning materials and organise facility, technology and equipment needs in time for delivery of learning sessions 3.3. Confirm overall delivery arrangements with relevant personnel
4. Deliver and facilitate training sessions	4.1. Conduct each session according to session plan, modified where appropriate to meet learner needs 4.2. Use the diversity of the group as another resource to

ELEMENT	PERFORMANCE CRITERIA
	support learning 4.3. Employ a range of delivery methods as training aids to optimise learner experiences 4.4. Demonstrate effective facilitation skills to ensure effective participation and group management
5. Support and monitor learning	5.1. Monitor and document learner progress to ensure outcomes are being achieved and individual learner needs are being met 5.2. Make adjustments to the delivery sessions to reflect specific needs and circumstances 5.3. Manage <i>inappropriate behaviour</i> to ensure learning can take place 5.4. Maintain and store learner records according to organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- presentation skills to ensure delivery is engaging and relevant, including:
 - synthesising information and ideas
 - preparing equipment, such as data projectors and computer presentation applications
 - speaking with appropriate tone and pitch
 - using language appropriate to audience
 - encouraging and dealing appropriately with questions
- group facilitation skills to ensure that:
 - every individual has an opportunity for participation and input
 - group cohesion is maintained
 - behaviour that puts others at risk is observed, interpreted and addressed
 - discussion and group interaction are enhanced
- conflict resolution and negotiation skills to:
 - identify critical points, issues, concerns and problems
 - identify options for changing behaviours
- oral communication and language skills to:

REQUIRED SKILLS AND KNOWLEDGE

- motivate learners to transfer skills and knowledge
- engage with the learner
- interpersonal skills to maintain appropriate relationships and ensure inclusivity
- observation skills to monitor individual and group progress

Required knowledge

- introductory knowledge of learning theories
- sound knowledge of learning principles
- sound knowledge of learner styles
- industry area and subject matter of the delivery
- learner group profile, including characteristics and needs of individual learners in the group
- content and requirements of the learning program and/or delivery plan
- different delivery methods and techniques appropriate to face-to-face group delivery
- techniques for the recognition and resolution of inappropriate behaviours
- behaviours in learners that may indicate learner difficulties
- organisational record-management systems and reporting requirements
- evaluation and revision techniques
- specific resources, equipment and support services available for learners with special needs
- relevant policy, legal requirements, codes of practice and national standards, including commonwealth and state or territory legislation that may affect training and assessment in the vocational education and training sector
- OHS relating to the facilitation of group-based learning, including:
 - assessment and risk control measures
 - reporting requirements for hazards
 - safe use and maintenance of relevant equipment
 - emergency procedures
 - sources of OHS information
 - role of key workplace persons
- policies and procedures relevant to the learning environment

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

EVIDENCE GUIDE	
Guidelines for the Training Package.	
Overview of assessment	Assessment must address the scope of this unit and reflect all components of the unit. Arrange of appropriate assessment methods and evidence-gathering techniques must be used to determine competency. A judgement of competency should only be made when the assessor is confident that the required outcomes of the unit have been achieved and that consistent performance has been demonstrated.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: <ul style="list-style-type: none"> facilitate group-based learning by preparing and delivering a series of training sessions, including: <ul style="list-style-type: none"> at least two consecutive sessions, of a duration commensurate with a substantive training session (e.g. 40-60 minutes), that follow one of the learning program designs at least one session delivered to a different learner group, with evidence of how the characteristics and needs of this group were addressed identify and respond to diversity and individual needs access and use documented resources and support personnel to guide inclusive practices.
Context of and specific resources for assessment	Evidence must be gathered in the workplace wherever possible. Where no workplace is available, a simulated workplace must be provided. Assessment must ensure access to: <ul style="list-style-type: none"> training products, such as training packages and accredited course documentation.
Method of assessment	
Guidance information for assessment	For further information about assessment of this and other TAE units, refer to relevant implementation guidance published on the IBSA website (www.ibsa.org.au).

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different

RANGE STATEMENT	
work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Learning program documentation</i> may include:	<ul style="list-style-type: none"> • competencies or other benchmarks to be achieved • for each chunk or segment of the learning program: <ul style="list-style-type: none"> • specific learning outcomes derived from the benchmarks • overview of content to be covered • learning resources, learning materials and activities • delivery methods • number and duration of training sessions or classes required, and overall timelines • OHS issues to be addressed in delivery • identification of assessment points to measure learner progress • assessment methods and tools to be used to collect evidence of competency, where assessment is required.
<i>Session plans</i> may include:	<ul style="list-style-type: none"> • outline of objectives and content to be addressed • plan of delivery methods and learning activities to be used within the session • timelines and duration for each learning activity • formative assessment points and opportunities • learning materials required.
<i>Inappropriate behaviour</i> may include:	<ul style="list-style-type: none"> • violent or inappropriate language • verbal or physical abuse or bullying • insensitive verbal or physical behaviour towards other learners or the trainer/facilitator, including cultural, racial, disability or gender-based insensitivities • dominant or overbearing behaviour • disruptive behaviour • non-compliance with safety instructions.

Unit Sector(s)

Unit sector	Delivery and facilitation
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

TAEDEL402A Plan, organise and facilitate learning in the workplace

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to plan, organise and facilitate learning for individuals in a workplace.
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Application of the Unit

Application of the unit	This unit typically applies to a person working as an entry level trainer, teacher or facilitator, team leader or workplace supervisor, or any employee responsible for guiding learning through work.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish effective work environment for learning	1.1. Establish and agree upon objectives and scope of the work-based learning 1.2. Analyse work practices and routines to determine their effectiveness in meeting established learning objectives 1.3. Identify and address <i>OHS implications</i> of using work as the basis for learning
2. Develop a work-based learning pathway	2.1. Address <i>contractual requirements</i> and responsibilities for learning at work 2.2. Arrange for integration and monitoring of external learning activities with the <i>work-based learning pathway</i> 2.3. Obtain agreement from relevant personnel to implement the work-based learning pathway
3. Establish the learning-facilitation relationship	3.1. Identify context for learning and individual's learning style 3.2. Select appropriate technique or process to facilitate learning and explain the basis of the technique to learner 3.3. Develop, document and discuss <i>individualised learning plan</i> with learner 3.4. Access, read and interpret documentation outlining the OHS responsibilities of the various parties in the learning environment 3.5. Monitor supervisory arrangements appropriate to learner's levels of knowledge, skill and experience to provide support and encouragement and ensure

ELEMENT	PERFORMANCE CRITERIA
	learner's health and safety
4. Implement work-based learning pathway	4.1. Sequence introduction of workplace tasks, activities and processes to reflect the agreed work-based learning pathway 4.2. Explain objectives of work-based learning and the processes involved to learner 4.3. Encourage learner to take responsibility for learning and to self-reflect 4.4. Develop techniques that facilitate learner's transfer of skills and knowledge
5. Maintain and develop the learning/facilitation relationship	5.1. Prepare for each session 5.2. Structure learning activities to support and reinforce new learning, build on strengths, and identify areas for further development 5.3. Observe learner cues and change approaches where necessary to maintain momentum 5.4. Practise <i>ethical behaviour</i> at all times 5.5. Monitor effectiveness of the learning/facilitation relationship through regular meetings between the parties
6. Close and evaluate the learning/facilitation relationship	6.1. Carry out the closure smoothly, using appropriate interpersonal and communication skills 6.2. Seek feedback from learner on the outcomes achieved and value of the relationship 6.3. Evaluate and document process, including <i>impact, self evaluation and reflection</i> , and file according to legal and organisational requirements
7. Monitor and review the effectiveness of the work-based learning pathway	7.1. Document work performance and learning achievement and keep records according to organisational requirements 7.2. Evaluate effectiveness of the work-based pathway against the objectives, processes and techniques used 7.3. Recommend improvements to work-based practice in light of the review process

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- oral communication and language skills to:
 - motivate the learner
 - transfer skills and knowledge
- interpersonal skills to maintain appropriate relationships
- observation skills to monitor individual progress
- literacy skills to:
 - read and interpret organisational documents, legal documents and contracts
 - complete and maintain documentation
- organisational skills to provide guidance and feedback to individuals
- communication skills, including:
 - using effective verbal and non-verbal language
 - using critical listening and questioning techniques
 - giving constructive and supportive feedback
 - assisting learners to paraphrase advice or instructions back to the trainer/facilitator
 - providing clear and concrete options and advice
 - using appropriate industry/profession terminology and language
 - ensuring language, literacy and numeracy used is appropriate to learners

Required knowledge

- systems, processes and practices within the organisation where work-based learning is taking place
- operational demands of the work and impact of changes on work roles
- organisational work culture, including industrial relations environment
- systems for identifying skill needs
- introductory knowledge of different learning styles and how to encourage learning in each, for example:
 - visual learners
 - audio learners
 - kinaesthetic learners
 - theoretical learners
- relevant policy, legislation, codes of practice and national standards that may affect training and assessment in the vocational education and training sector
- OHS relating to the work role, including:
 - hazards relating to the industry and specific workplace
 - reporting requirements for hazards and incidents

REQUIRED SKILLS AND KNOWLEDGE

- specific procedures for work tasks
- safe use and maintenance of relevant equipment
- emergency procedures
- sources of OHS information

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment must address the scope of this unit and reflect all components of the unit. A range of appropriate assessment methods and evidence-gathering techniques must be used to determine competency. A judgement of competency should only be made when the assessor is confident that the required outcomes of the unit have been achieved and that consistent performance has been demonstrated.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- prepare and facilitate work-based learning
- provide evidence of a minimum of two examples of developing work-based learning pathways, that include:
 - identifying needs for learning
 - analysing work practices, work environment and work activities
 - organising and allocating work in a way that reflects learning needs and provides effective learning opportunities through work processes
- provide a minimum of two examples of a learning facilitation relationship being conducted:
 - with different individuals
 - demonstrating communication skills and flexibility
 - demonstrating one or more of the processes or techniques identified.

Context of and specific resources for assessment

Evidence must be gathered in the workplace wherever possible. Where no workplace is available, a simulated workplace must be provided.

EVIDENCE GUIDE	
	Assessment must ensure access to information about work activities.
Method of assessment	
Guidance information for assessment	For further information about assessment of this and other TAE units, refer to relevant implementation guidance published on the IBSA website (www.ibsa.org.au).

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>OHS implications</i> may include:	<ul style="list-style-type: none"> • OHS obligations • workplace OHS policies and procedures • ensuring work practices, routines and proposed changes do not pose a risk to learners and others.
<i>Contractual requirements</i> may include:	<ul style="list-style-type: none"> • training plans under apprenticeships/traineeships • requirements of government-funded training programs, such as Workplace English Language and Literacy (WELL).
<i>Work-based learning pathway</i> may include:	<ul style="list-style-type: none"> • identifying specific goals for work-based learning • identifying job tasks or activities to be included in learning process • appropriate sequencing of job tasks/activities to reflect learner incremental development • direct guidance and modelling from experienced co-workers and experts • opportunities for practice.
<i>Individualised learning plan</i> may include:	<ul style="list-style-type: none"> • information about individual's learning style, learner characteristics, and the context for learning • clear boundaries and expectations of the learning/facilitation relationship • documented equity or additional support needs for the learner

RANGE STATEMENT	
	<ul style="list-style-type: none"> • performance benchmarks to be achieved • activities and processes which together will achieve the benchmarks.
<i>Ethical behaviour</i> includes:	<ul style="list-style-type: none"> • trust • integrity • privacy and confidentiality of the session • following organisational policies • knowing own limitations • having a range of other intervention referrals ready when needed • honesty • fairness to others.
<i>Impact</i> may be:	<ul style="list-style-type: none"> • successful achievement, rate of achievement, or lack of achievement of identified goals • achievement of other outcomes as a result of the relationship • development of new goals • new or increased motivation to learn • greater capacity to learn • increase in learner's self-confidence.
<i>Self-evaluation and reflection</i> may include:	<ul style="list-style-type: none"> • asking critical questions about: <ul style="list-style-type: none"> • own ability • what worked or didn't work • how the relationship building process could be improved • reviewing records and journals on sessions and critically evaluating own performance • reviewing feedback from learner and identifying critical aspects and areas for improvement.

Unit Sector(s)

Unit sector	Delivery and facilitation
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

TAEDES401A Design and develop learning programs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to conceptualise, design, develop and review learning programs to meet an identified need for a group of learners. The unit addresses the skills and knowledge needed to identify the parameters of a learning program, determine the design, outline the content and review its effectiveness.
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Application of the Unit

Application of the unit	This unit typically applies to a trainer or facilitator who designs or develops learning programs. A learning program can be discrete, providing a planned learning approach that relates to specific learning and training needs, or it may form part of the learning design for a qualification.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define parameters of the learning program	1.1. Clarify <i>purpose</i> and type of learning program with key stakeholders 1.2. Access and confirm the competency standards and <i>other training specifications</i> on which to base the learning program 1.3. Identify language, literacy and numeracy requirements of the program 1.4. Identify and consider characteristics of the target learner group
2. Work within the vocational education and training (VET) policy framework	2.1. Access relevant <i>VET policies</i> and frameworks, and apply to work practices 2.2. Identify changes to training packages and accredited courses and apply these to program development 2.3. Conduct work according to organisational quality assurance policies and procedures
3. Develop program content	3.1. Research, develop and document specific subject matter content according to agreed design options 3.2. Evaluate existing learning resources for content relevance and quality 3.3. Specify assessment requirements of the learning program
4. Design structure of the learning program	4.1. Break the learning content into manageable segments and document timeframe for each segment

ELEMENT	PERFORMANCE CRITERIA
	<p>4.2. Determine and confirm <i>delivery strategies</i> and required assessment methods and tools</p> <p>4.3. Document complete learning program in line with organisational requirements</p> <p>4.4. Review complete program with key stakeholders and adjust as required</p> <p>4.5. Ensure a safe learning progression by analysing risks in the learning environment and including a risk control plan</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- organisational skills to ensure resources are available and suitable
- evaluation skills to determine the time required for each learning segment and the overall timelines of the learning program
- cognitive skills to develop the learning program content and design its structure
- language and literacy skills to read and interpret a range of documentation, including technical and subject matter documents, references and texts

Required knowledge

- information about training package developers and course accreditation agencies responsible for specific learning program parameters
- training packages and relevant competency standards to be used as the basis of the learning program
- other performance standards and criteria to be used as the basis of the learning program, where relevant
- distinction and relationship between a training package/accredited course, learning strategy and learning program, where linked
- different purposes and focus of learning programs
- sound knowledge of learning principles
- instructional design principles relating to different design options for learning program design and structure
- availability and types of different relevant learning resources, learning materials and pre-developed learning activities
- methodology relating to developing and documenting new learning activities and

REQUIRED SKILLS AND KNOWLEDGE

related learning materials

- different delivery modes and methods
- relevant policies, legal requirements, codes of practice and national standards, including commonwealth and state or territory legislation that may affect training and assessment in the VET sector
- relevant OHS knowledge relating to the work role, and OHS considerations that need to be included in the learning program

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	Assessment must address the scope of this unit and reflect all components of the unit. A range of appropriate assessment methods and evidence-gathering techniques must be used to determine competency. A judgement of competency should only be made when the assessor is confident that the required outcomes of the unit have been achieved and that consistent performance has been demonstrated.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: <ul style="list-style-type: none"> • design, develop and review learning programs within the VET context • prepare and develop a minimum of two learning programs: <ul style="list-style-type: none"> • that contain differentiated learning program designs to reflect particular needs, contexts and timelines • at least one of which must be based on competency standards or accredited courses and must cover at least one entire unit of competency or accredited course module.
Context of and specific resources for assessment	Evidence must be gathered in the workplace whenever possible. Where no workplace is available, a simulated workplace must be provided.
Method of assessment	
Guidance information for assessment	For further information about assessment of this and other TAE units, refer to relevant implementation guidance published on the

EVIDENCE GUIDE

	IBSA website (www.ibsa.org.au).
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Purpose</i> may include:	<ul style="list-style-type: none"> • developing vocational competency or vocational skills • developing language, literacy and numeracy skills • developing general education • meeting legislative, licensing and registration requirements, such as OHS requirements.
<i>Other training specifications</i> may include:	<ul style="list-style-type: none"> • curriculum specifications • product specifications • organisational work requirements and training needs • induction needs • language, literacy and numeracy development needs • regulatory and licensing requirements.
<i>Vocational education and training policies</i> may include:	<ul style="list-style-type: none"> • policies and procedures set by national organisations, such as the National Quality Council • Australian Quality Training Framework • other relevant policies.
<i>Delivery strategies</i> may include:	<ul style="list-style-type: none"> • focus of delivery in terms of size and type of group • context of delivery, for example: <ul style="list-style-type: none"> • in the workplace • in a training room • in a community setting • mode of delivery, for example: <ul style="list-style-type: none"> • face-to-face • online • blended delivery mode • delivery methods, for example: <ul style="list-style-type: none"> • lock-step, learner-paced and mixed

RANGE STATEMENT

	<ul style="list-style-type: none"> • interactive, participative and collaborative • blended delivery methods.
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Unit Sector(s)

Unit sector	Learning design
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

TAEDES402A Use training packages and accredited courses to meet client needs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to use training packages and accredited courses as tools to support industry, organisation and individual competency development needs.
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Application of the Unit

Application of the unit	This unit typically applies to a person working in or with training and/or assessment organisations as an entry-level trainer, teacher, facilitator or assessor. It assumes that the person is working from a pre-defined training product, such as a training package or accredited course, and applying that product to meet client needs.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select appropriate training package or accredited course	1.1. Confirm training and/or assessment needs of <i>client</i> 1.2. Identify and source training packages and/or accredited courses which could satisfy client needs 1.3. Use training products in line with the <i>training and assessment organisation's quality assurance policies</i> and procedures
2. Analyse and interpret the qualifications framework	2.1. Read and interpret qualification rules 2.2. Review and determine applicable licensing requirements and prerequisites 2.3. Determine suitable electives that meet client needs and job roles
3. Analyse and interpret units of competency and accredited modules	3.1. Select individual unit or accredited module to meet client needs 3.2. Read, analyse and interpret all parts of the unit or accredited module for application to client needs 3.3. Analyse links between unit and/or accredited module to develop effective applications for the client 3.4. Document analysis of unit or accredited module in a clear and accessible manner
4. Contextualise units and modules for client applications	4.1. Use information from the client to <i>contextualise the unit</i> or accredited module to meet client needs 4.2. Use advice on contextualisation produced by the

ELEMENT	PERFORMANCE CRITERIA
	training package developer or course developer to meet client needs
5. Analyse and interpret assessment guidance	5.1. Read, analyse and apply the assessment guidance of the relevant training package or accredited course 5.2. Determine any special requirements for assessment or reasonable adjustment to suit client needs

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication and interpersonal skills to collaborate with others in using training products
- planning skills to develop a structure for a particular application of training packages and accredited courses
- cognitive skills to analyse, interpret and apply the various components of selected training packages and accredited courses
- research skills to analyse and interpret training package and accredited course content to meet client needs

Required knowledge

- Australian Qualifications Framework (AQF) guidelines, including characteristics of AQF qualification levels
- functions and responsibilities of training package developers and course accreditation agencies, and their roles as key vocational education and training (VET) organisations
- dimensions of competency
- format and structure of accredited courses
- format and structure of competency standards
- function of training packages and accredited curriculum as benchmarks in a competency-based VET training and assessment system
- methodology relating to analysing and using competency standards for a range of applications and purposes to meet the needs of a diverse range of VET clients
- language and terminology used in training packages and accredited courses
- parts of training packages that can be contextualised and parts that cannot
- structure of training packages and the role and purpose of each endorsed component

REQUIRED SKILLS AND KNOWLEDGE

- sources of training package information

Evidence Guide**EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	Assessment must address the scope of this unit and reflect all components of the unit. Arrange of appropriate assessment methods and evidence-gathering techniques must be used to determine competency. A judgement of competency should only be made when the assessor is confident that the required outcomes of the unit have been achieved and that consistent performance has been demonstrated.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: <ul style="list-style-type: none"> • analyse a training package and or accredited course to examine its component parts, identify relevant units of competency or modules, and contextualise those to meet a specific client need • demonstrate a minimum of two examples of analysing training specifications, including at least one training package; the other may be another training package or an accredited course that meets a specific client need.
Context of and specific resources for assessment	Evidence must be gathered in the workplace wherever possible. Where no workplace is available, a simulated workplace must be provided. Assessment must ensure access to: <ul style="list-style-type: none"> • training products, such as training packages and accredited course documentation.
Method of assessment	
Guidance information for assessment	For further information about assessment of this and other TAE units, refer to relevant implementation guidance published on the IBSA website (www.ibsa.org.au).

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Client</i> may include:	<ul style="list-style-type: none"> • individual learners • candidates for assessment • organisations or enterprises with specific training needs.
<i>Training and assessment organisation</i> may include:	<ul style="list-style-type: none"> • registered training organisation (RTO) • organisation working in a partnership arrangement with an RTO to provide recognised training and assessment services • organisation that provides non-recognised training and assessment services.
<i>Quality assurance policies</i> may include:	<ul style="list-style-type: none"> • Australian Quality Training Framework requirements as they apply to RTOs • organisational internal quality policies and procedures.
<i>Contextualising units:</i>	<ul style="list-style-type: none"> • means linking the requirements of the competency standard to the work environment of a particular client or client group • may include: <ul style="list-style-type: none"> • identifying specific types of tools and equipment relevant to the competency • identifying specific organisational policies, procedures, processes and forms relevant to the competency • linking organisation-specific terminology to the competency • identifying specific people relevant to the competency.

Unit Sector(s)

Unit sector	Learning design
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

TLIA2012A Pick and process orders

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to pick and process orders in accordance with workplace requirements including identifying workplace order picking processes, policies and procedures; picking and despatching orders, and recording stock levels. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in accordance with relevant codes/regulations and workplace requirements for the picking and processing of orders.

Work is performed under some supervision generally within a team environment. It involves the application of workplace procedures to the picking and processing of orders in the warehousing, distribution and/or storage industries.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| 1 Identify workplace order picking processes, policies and procedures | 1.1 Workplace procedures for order picking and related workplace documentation are interpreted
1.2 Stock allocation and location systems are identified and located
1.3 Appropriate manual handling equipment is selected in accordance with OH&S regulations and workplace procedures |
| 2 Pick and despatch an order | 2.1 Work requirements are planned with appropriate equipment and documentation assembled
2.2 Zones of the warehouse which store required products are identified and located
2.3 Pick path is established
2.4 Where required, appropriate pallet(s) for orders are selected and stacked to minimise stock damage and maximise stability
2.5 Products are selected and consolidated
2.6 Products/pallets are located in despatch areas
2.7 Products are assembled to meet workplace schedules
2.8 Orders are consolidated, secured, arranged and placed in storage zones in accordance with the schedule |
| 3 Record stock levels | 3.1 Storage areas are checked and stocks are noted for replenishment in accordance with workplace procedures
3.2 Workplace records are completed in accordance with workplace requirements |

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Regulations relevant to the picking and processing of orders, including relevant bond, quarantine or other legislative requirements
- Relevant OH&S and environmental protection procedures and guidelines
- Workplace procedures and policies for the picking and processing of orders
- Focus of operation of work systems, equipment, management and site operating systems for the picking and processing of orders
- Problems that may occur when picking and processing an order and appropriate action that can be taken to resolve the problems
- Documentation and record requirements when picking and processing an order
- Equipment used during picking and processing operations and the precautions and procedures that should be followed in its use
- Housekeeping standards procedures required in the workplace
- Site layout and obstacles

Required skills:

- Communicate effectively with others when picking and processing orders
- Read and comprehend simple statements in English
- Read and interpret instructions, procedures, signs and labels relevant to the picking and processing of orders
- Complete documentation related to picking and processing orders
- Identify relevant stock and goods coding and labelling, including ADG and IMDG markings
- Work collaboratively with others when picking and processing orders
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions when picking and processing orders in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unplanned events when picking and processing orders
- Apply precautions and required action to minimise, control or eliminate hazards that may exist when picking and processing orders
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Required skills:

- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use relevant equipment and communications technology when picking and processing orders
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Estimate the size, shape and special requirements of goods/loads

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation

EVIDENCE GUIDE

- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- | | |
|---|---|
| Work may be conducted: | <ul style="list-style-type: none"> • by day or night • in a range of work environments |
| Customers may be: | <ul style="list-style-type: none"> • internal or external |
| Workplaces may comprise: | <ul style="list-style-type: none"> • large, medium or small worksites |
| Work may be conducted in: | <ul style="list-style-type: none"> • limited or restricted spaces • exposed conditions • controlled or open environments |
| Problems that may occur when picking and processing an order include: | <ul style="list-style-type: none"> • wrong stock is picked • wrong carton for order • incorrect location • damaged stock • no stock at location • incorrect quantity • failing to meet a special order requirement |
| Special order requirements may include: | <ul style="list-style-type: none"> • pricing • special packing • specific size of carton • special categories of stock |
| Hazards in the work area may include exposure to: | <ul style="list-style-type: none"> • chemicals • dangerous or hazardous substances • movements of equipment, goods and materials • oil or water on floor • a fire or explosion |

RANGE STATEMENT

- Consultative processes may involve:
- damaged packaging or pallets
 - debris on floor
 - faulty racking
 - poorly stacked pallets
 - faulty equipment
 - workplace personnel
 - supervisors and managers
 - customers/clients
 - contractors
 - official representatives
- Communication in the work area may include:
- phone
 - electronic data interchange (EDI)
 - fax
 - email
 - internet
 - RF communications
 - barcode readers
 - oral, aural or signed communications
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - high visibility clothing
- Information/documents may include:
- goods identification numbers and codes
 - manifests, picking slips, merchandise transfers, stock requisitions and bar codes
 - manufacturers specifications for equipment/tools
 - workplace procedures and policies
 - supplier and/or client instructions
 - material safety data sheets
 - codes of practice including the National Standards for Manual Handling and the Industry Safety Code
 - relevant legislation, regulations and related documentation
 - award, enterprise bargaining agreement, other industrial arrangements
 - standards and certification requirements

RANGE STATEMENT

Applicable regulations and legislation may include:

- quality assurance procedures
- emergency procedures
- relevant codes and regulations pertaining to the picking and processing of orders
- Australian Dangerous Goods Code
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation
- licence, patent or copyright arrangements
- water and road use and licence arrangements
- export/import/quarantine/bond requirements
- workplace relations regulations
- workers compensation regulations

Unit Sector(s)

Not Applicable

Competency Field

Competency Field A - Handling Cargo/Stock

TLIA3018A Organise despatch operations

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to organise despatch operations in accordance with workplace requirements including planning and organising despatch operations, organising the storage and despatch of stock, and completing all required documentation and records. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in accordance with codes/regulations and workplace requirements relevant to the organisation of despatch operations.

Work is performed under some supervision generally within a team environment. It involves the application of regulatory requirements and workplace procedures to the organisation of despatch operations in the warehousing, distribution and/or storage industries.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Plan and organise despatch operations

- 1.1 Knowledge of product characteristics and workplace procedures are applied to the analysis of the stock
- 1.2 Resources including manual handling equipment, employee competencies, storage areas and goods management equipment are identified to match stock characteristics
- 1.3 Deadlines are scheduled to meet order requirements
- 1.4 Work processes are planned to meet deadlines

2 Organise the storage and despatch of stock

- 2.1 Employees, equipment and storage areas are allocated and supervised
- 2.2 Individuals are informed of work requirements and deadlines
- 2.3 Work processes are monitored to ensure that resources, both human and equipment, are maintained at productive levels and in accordance with workplace procedures and OH&S requirements
- 2.4 Discrepancies in stocks are noted and reported in accordance with company procedures

3 Complete documentation

- 3.1 Required despatch documentation and records are completed in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Regulations relevant to the organising of despatch operations, including the ADG Code and

REQUIRED KNOWLEDGE AND SKILLS

relevant bond, quarantine or other legislative requirements

- Relevant OH&S and environmental protection procedures and guidelines
- Workplace procedures and policies for the organising of despatch operations
- Focus of operation of work systems, equipment, management and site operating systems for the organising of despatch operations
- Problems that may occur when organising despatch operations and appropriate action that can be taken to resolve the problems
- Documentation and record requirements for despatch operations
- Equipment used during the organisation of despatch operations and the precautions and procedures that should be followed in its use
- Housekeeping standards procedures required in the workplace
- Site layout and obstacles

Required skills:

- Communicate effectively with others when organising despatch operations
- Read and comprehend simple statements in English
- Read and interpret instructions, procedures and labels relevant to the organising of despatch operations
- Complete documentation related to the organising of despatch operations
- Identify relevant stock and goods coding and labelling, including ADG and IMDG markings
- Work collaboratively with others when organising despatch operations
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when organising despatch operations in accordance with regulatory requirements and workplace procedures
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Select and use relevant equipment and communications technology when organising despatch operations
- Estimate the size, shape and special requirements of goods and loads

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Work may be conducted:
- in a range of work environments
 - by day or night
- Customers may be:
- internal or external
- Workplaces may comprise:
- large, medium or small worksites
- Work may be conducted in:
- limited or restricted spaces
 - exposed conditions
 - controlled or open environments
- Goods to be despatched may involve:
- special handling, location, storage and/or packaging requirements, including temperature controlled goods, dangerous goods or hazardous substances
- Problems that may occur when despatching an order include:
- wrong stock is despatched
 - wrong carton for order
 - incorrect location
 - damaged stock
 - no stock at location
 - incorrect quantity
 - failing to meet a special order requirement
 - failing to meet customers delivery requirements
- Special order requirements may include:
- pricing
 - special packing
 - specific size of carton
 - special categories of stock
- Hazards in the work area may include exposure to:
- chemicals
 - dangerous or hazardous substances
 - movements of equipment, goods and materials
 - oil or water on floor
 - a fire or explosion
 - damaged packaging or pallets
 - debris on floor
 - faulty racking
 - poorly stacked pallets
 - faulty equipment
- Communication in the work area may include:
- phone
 - electronic data interchange (EDI)
 - fax

RANGE STATEMENT

- email
 - internet
 - RF communications
 - barcode readers
 - oral, aural or signed communications
 - company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - high visibility clothing
- Consultative processes may involve:
- workplace personnel
 - supervisors and managers
 - customers/clients
 - drivers and agents
 - contractors
 - official representatives
- Information/documents may include:
- goods identification numbers and codes
 - manifests, picking slips, merchandise transfers, stock requisitions and bar codes
 - manufacturers specifications for equipment/tools
 - workplace procedures and policies
 - supplier and/or client instructions
 - dangerous goods declarations and material safety data sheets (where applicable)
 - codes of practice including the National Standards for Manual Handling and the Industry Safety Code
 - relevant legislation, regulations and related documentation including the ADG Code
 - award, enterprise bargaining agreement, other industrial arrangements
 - standards and certification requirements
 - quality assurance procedures
 - emergency procedures
- Applicable regulations and legislation may include:
- relevant codes and regulations pertaining to the organising of despatch operations
 - Australian and international regulations and codes of practice for the handling and transport of dangerous goods

RANGE STATEMENT

and hazardous substances, including:

- Australian and International Dangerous Goods Codes
- Australian Marine Orders and the International Maritime Dangerous Goods Code
- IATA Dangerous Goods by Air Regulations
- Australian and international explosives codes
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation
- licence, patent or copyright arrangements
- water and road use and licence arrangements
- export/import/quarantine/bond requirements
- workplace relations regulations
- workers compensation regulations

Unit Sector(s)

Not Applicable

Competency Field

Competency Field A - Handling Cargo/Stock

TLIC2002A Drive light rigid vehicle

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to drive a light rigid vehicle safely including systematic and efficient control of all vehicle functions, monitoring of traffic and road conditions, management of vehicle condition, and performance and effective management of hazardous situations. Assessment of this unit may be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory Road Traffic Authority. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Driving must be carried out in compliance with the licence requirements and regulations of the relevant state/territory roads and traffic authority pertaining to light rigid vehicles.

Driving is performed with limited or minimum supervision, and with limited accountability and responsibility for self and others in achieving the prescribed outcomes.

Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial light rigid vehicle across a variety of driving contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Drive the light rigid vehicle

- 1.1 The light rigid vehicle is started, steered, manoeuvred, positioned and stopped in accordance with traffic regulations and manufacturers instructions
- 1.2 Engine power is managed to ensure efficiency and performance and to minimise engine and transmission damage
- 1.3 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving
- 1.4 The light rigid vehicle is driven in reverse, maintaining visibility and achieving accurate positioning
- 1.5 The light rigid vehicle is parked, shut down and secured in accordance with manufacturers specifications, traffic regulations and workplace procedures
- 1.6 Appropriate procedures are followed in the event of a driving emergency

2 Monitor traffic and road conditions

- 2.1 The most efficient route of travel is taken through monitoring and anticipation of traffic flows and conditions, road standards and other factors likely to cause delays or route deviations
- 2.2 Traffic and road conditions are constantly monitored and acted upon to enable safe operation and ensure no injury to people or damage to property, equipment, loads and facilities

3 Monitor and maintain vehicle performance

- 3.1 Vehicle performance is maintained through pre-operational inspections and checks of the vehicle
- 3.2 Performance and efficiency of vehicle operation is monitored during use
- 3.3 Defective or irregular performance or malfunctions are reported to the appropriate authority

ELEMENT**PERFORMANCE CRITERIA**

3.4 Vehicle records are maintained/updated and information is processed in accordance with workplace procedures

Required Skills and Knowledge**REQUIRED KNOWLEDGE AND SKILLS**

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements of the relevant state/territory road traffic authority
- Relevant OH&S and environmental procedures and regulations
- Light rigid vehicle controls, instruments and indicators and their use
- Light rigid vehicle handling procedures
- Driving hazards and related defensive driving techniques
- Procedures to be followed in the event of a driving emergency
- Engine power management and safe driving strategies
- Efficient driving techniques
- Pre-operational checks carried out on vehicle and related action
- Differences between transmission types
- Map reading and road navigation techniques including the use of a GPS device where applicable
- Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- Workplace driving and operational instructions
- Principles of stress management when driving a vehicle
- Causes and effects of fatigue on drivers
- Factors which increase fatigue-related accidents
- Fatigue management strategies including on-road techniques
- Lifestyles which promote the effective long-term management of fatigue

Required skills:

- Communicate effectively with others when driving a commercial light rigid vehicle
- Read and interpret instructions, procedures, information and signs relevant to the driving of a commercial light rigid vehicle

Required skills:

- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the driving of a commercial light rigid vehicle
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when driving a commercial light rigid vehicle
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events when driving a commercial light rigid vehicle
- Apply precautions and required action to minimise, control or eliminate hazards that may exist when driving a commercial light rigid vehicle
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor and anticipate traffic hazards and take appropriate action
- Carry out pre-operational checkson the vehicle in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills

EVIDENCE GUIDE

- Context of and specific resources for assessment**
- relevant legislation and workplace procedures
 - other relevant aspects of the range statement
 - Performance is demonstrated consistently over a period of time and in a suitable range of contexts
 - Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
 - In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- Method of assessment**
- Assessment of this unit must be undertaken by a registered training organisation
 - As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
 - Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Type of vehicle includes:
- all light rigid vehicles including trucks and buses greater than 4.5 tonnes or seating more than 12 adults including the driver
- Driving may be carried out in typical road transport situations, including:
- operations conducted at day or night
 - typical weather conditions
 - on the open road

RANGE STATEMENT

- Vehicle handling procedures may include:
- on a private road
 - while at a depot, base or warehouse
 - while at a client's workplace or work site
 - starting a vehicle
 - steering and manoeuvring a vehicle
 - accelerating and braking
 - positioning and stopping a vehicle
 - reversing a vehicle
 - operating vehicle controls, instruments and indicators
 - using defensive driving techniques
 - managing engine performance
- Pre-operational checks may include:
- visual check of vehicle
 - checking and topping up of fluid levels
 - checks of tyre pressures
 - checks of operation of vehicle lights and indicators
 - checks of brakes
- Minor routine repairs may include:
- replacement of blown globes in vehicle lights
 - replacement of broken fan belt
 - replacement of blown fuse
 - replacement of door mirrors
 - repairs to rear tail-light lens
 - changing of tyres
 - repair of tyre punctures
 - replacement of broken coolant hose
- Driving hazards may include (examples only):
- wet and iced roads
 - oil on road
 - animals and objects on road
 - fire in vehicle
 - leaking fuel
 - faulty brakes
 - parked vehicles on the road
 - faulty steering mechanism on vehicle
 - pedestrians crossing the road
 - flooded sections of road
 - windy sections of road
 - foggy conditions
- Factors that can cause traffic delays and diversions may include (examples only):
- traffic accidents
 - flooded sections of road
 - road damage
 - bridge/tunnel damage

RANGE STATEMENT

- road works
 - building construction
 - emergency situations such as bushfires, building fires, etc.
 - road closures for special events such as marches, parades, etc.
 - holiday traffic
 - road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.
 - company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- Documentation/records may include:
- state/territory light rigid vehicle driving licence requirements
 - state/territory road rules
 - workplace driving instructions and procedures
 - vehicle manufacturers instructions, specifications and recommended driving procedures including preoperational checks of vehicle
 - emergency procedures
 - vehicle log book or record book (where required)
- Applicable procedures and codes may include:
- relevant state/territory roads and traffic authority driving regulations and licence requirements pertaining to light rigid vehicles
 - relevant state/territory road rules
 - relevant state/territory permit regulations and requirements
 - relevant state/territory OH&S legislation
 - relevant state/territory fatigue management regulations
 - relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field C - Vehicle Operation

TLIC3003A Drive medium rigid vehicle

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to drive a medium rigid vehicle safely including systematic and efficient control of all vehicle functions, monitoring of traffic and road conditions, management of vehicle condition and performance and effective management of hazardous situations. Assessment of this unit may be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory Road Traffic Authority. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Driving must be carried out in compliance with the licence requirements and regulations of the relevant state/territory roads and traffic authority pertaining to medium rigid vehicles.

Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes.

Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial medium rigid vehicle across a variety of driving contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Drive the medium rigid vehicle

- 1.1 The medium rigid vehicle is started, steered, manoeuvred, positioned and stopped in accordance with traffic regulations and manufacturers instructions
- 1.2 Engine power is managed to ensure efficiency and performance and to minimise engine and transmission damage
- 1.3 Engine operation is maintained within the manufacturer's specified torque range and temperature through effective transmission use
- 1.4 Braking system of medium rigid vehicle is managed and operated to ensure effective control of the vehicle under all conditions
- 1.5 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving
- 1.6 The medium rigid vehicle is driven in reverse, maintaining visibility and achieving accurate positioning
- 1.7 The medium rigid vehicle is parked, shut down and secured in accordance with manufacturers specifications, traffic regulations and workplace procedures
- 1.8 Appropriate procedures are followed in the event of a driving emergency

2 Monitor traffic and road conditions

- 2.1 The most efficient route of travel is taken through monitoring and anticipation of traffic flows and conditions, road standards and other factors likely to cause delays or route deviations
- 2.2 Traffic and road conditions are constantly monitored and acted upon to enable safe operation and to ensure no injury to people

ELEMENT	PERFORMANCE CRITERIA
3 Monitor and maintain vehicle performance	or damage to property, equipment, loads and facilities 3.1 Vehicle performance is maintained through pre-operational inspections and checks of the vehicle 3.2 Performance and efficiency of vehicle operation is monitored during use 3.3 Defective or irregular performance or malfunctions are reported to the appropriate authority 3.4 Vehicle records are maintained/updated and information is processed in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements of the relevant state/territory road traffic authority
- Relevant OH&S and environmental procedures and regulations
- Medium rigid vehicle controls, instruments and indicators and their use
- Medium rigid vehicle handling procedures
- Procedures to be followed in the event of a driving emergency
- Engine power management and safe driving strategies
- Efficient driving techniques
- Workplace driving and operational instructions
- Driving hazards and related defensive driving techniques
- Pre-operational checks carried out on vehicle and related action
- Differences between transmission types
- Principles of operation of air brakes and procedures for their use
- Principles of stress management when driving a vehicle
- Map reading and road navigation techniques including the use of a GPS device where applicable
- Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- Causes and effects of fatigue on drivers
- Factors which increase fatigue-related accidents

REQUIRED KNOWLEDGE AND SKILLS

- Fatigue management strategies including on-road techniques
- Lifestyles which promote the effective long-term management of fatigue

Required skills:

- Communicate effectively with others when driving a medium rigid vehicle
- Read and interpret instructions, procedures, information and signs relevant to work activities
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to work activities
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when driving a medium rigid vehicle
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when driving a medium rigid vehicle in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events when driving a medium rigid vehicle
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of equipment
- Monitor and anticipate traffic hazards and take appropriate action
- Carry out pre-operational checks on a medium rigid vehicle
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Type of vehicle includes:
- all medium rigid vehicles, for example any 2-axle rigid vehicle, including truck and bus greater than 8 tonnes GVM
- Driving may be carried out in typical road transport situations, including:
- operations conducted at day or night
 - typical weather conditions
 - on the open road
 - on a private road
 - while at a depot, base or warehouse
 - while at a client's workplace or work site
- Vehicle handling procedures may include:
- starting a vehicle
 - steering and manoeuvring a vehicle
 - accelerating and braking
 - positioning and stopping a vehicle
 - reversing a vehicle
 - operating vehicle controls, instruments and indicators
 - using air brakes
 - using defensive driving techniques
 - managing engine performance
- Pre-operational checks may include:
- visual check of vehicle
 - checking and topping up of fluid levels
 - checks of tyre pressures
 - checks of operation of vehicle lights and indicators
 - checks of brakes
- Minor routine repairs may include:
- replacement of blown globes in vehicle lights
 - replacement of broken fan belt
 - replacement of blown fuse
 - replacement of door mirrors
 - repairs to rear tail-light lens
 - changing of tyres
 - repair of tyre punctures
 - replacement of broken coolant hose
- Driving hazards may include (examples only):
- wet and iced roads
 - oil on road
 - animals and objects on road
 - fire in vehicle
 - leaking fuel

RANGE STATEMENT

Factors that can cause traffic delays and diversions may include:

- faulty brakes
- parked vehicles on the road
- faulty steering mechanism on vehicle
- pedestrians crossing the road
- flooded sections of road
- windy sections of road
- foggy conditions
- traffic accidents
- flooded sections of road
- road damage
- bridge/tunnel damage
- road works
- building construction
- emergency situations such as bushfires, building fires, etc.
- road closures for special events such as marches, parades, etc.
- holiday traffic
- road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Documentation/records may include:

- state/territory medium rigid vehicle driving licence requirements
- state/territory road rules
- workplace driving instructions and procedures
- vehicle manufacturers instructions, specifications and recommended driving procedures including preoperational checks of vehicle
- emergency procedures
- vehicle log book or record book (where required)

Applicable procedures and codes may include:

- relevant state/territory roads and traffic authority driving regulations and licence requirements pertaining to medium rigid vehicles
- relevant state/territory road rules
- relevant state/territory permit regulations and requirements
- relevant state/territory OH&S legislation
- relevant state/territory fatigue management regulations
- relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field C - Vehicle Operation

TLIC3004A Drive heavy rigid vehicle

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to drive a heavy rigid vehicle safely including systematic and efficient control of all vehicle functions, monitoring of traffic and road conditions, management of vehicle condition and performance, and effective management of hazardous situations. Assessment of this unit may be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory Road Traffic Authority. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Driving must be carried out in compliance with the licence requirements and regulations of the relevant state/territory roads and traffic authority pertaining to heavy rigid vehicles.

Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes.

Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial heavy rigid vehicle across a variety of driving contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Drive the heavy rigid vehicle

- 1.1 The heavy rigid vehicle is started, steered, manoeuvred, positioned and stopped in accordance with traffic regulations and manufacturers instructions
- 1.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage
- 1.3 Engine operation is maintained within the manufacturer's specified torque range and temperature through effective gear selection and smooth transition in gear changes
- 1.4 Braking system of heavy rigid vehicle is managed and operated to ensure effective control of the vehicle under all conditions
- 1.5 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving
- 1.6 The heavy rigid vehicle is driven in reverse, maintaining visibility and achieving accurate positioning.
- 1.7 The heavy rigid vehicle is parked, shut down and secured in accordance with manufacturers specifications, traffic regulations and workplace procedures
- 1.8 Where required, overwidth and overweight permit applications are undertaken in accordance with relevant regulatory requirements
- 1.9 Appropriate procedures are followed in the event of a driving emergency

2 Monitor traffic and road conditions

- 2.1 The most efficient route of travel is taken through monitoring and anticipation of traffic flows and conditions, road standards and other factors likely to cause delays or route deviations
- 2.2 Traffic and road conditions are constantly monitored and acted

ELEMENT	PERFORMANCE CRITERIA
3 Monitor and maintain vehicle performance	<p>upon to enable safe operation and ensure no injury to people or damage to property, equipment loads and facilities</p> <p>3.1 Vehicle performance is maintained through pre-operational inspections and checks of the vehicle</p> <p>3.2 Performance and efficiency of vehicle operation is monitored during use</p> <p>3.3 Defective or irregular performance or malfunctions are reported to the appropriate authority</p> <p>3.4 Vehicle records are maintained/updated and information is processed in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements of the relevant state/territory road traffic authority
- Relevant OH&S and environmental procedures and regulations
- Heavy rigid vehicle controls, instruments and indicators and their use
- Heavy rigid vehicle handling procedures
- Procedures to be followed in the event of a driving emergency
- Engine power management and safe driving strategies
- Efficient driving techniques
- Pre-operational checks carried out on heavy rigid vehicle and related action
- Differences between transmission types
- Principles of operation of air brakes and procedures for their use
- Workplace driving and operational instructions
- Driving hazards and related defensive driving techniques
- Principles of stress management when driving a vehicle
- Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- Causes and effects of fatigue on drivers
- Factors which increase fatigue-related accidents
- Fatigue management strategies and on-road techniques

REQUIRED KNOWLEDGE AND SKILLS

- Lifestyles which promote the effective long-term management of fatigue

Required skills:

- Communicate effectively with others when driving a commercial heavy rigid vehicle
- Read and interpret instructions, procedures, information and signs relevant to when the driving of a commercial heavy rigid vehicle
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the driving of a commercial heavy rigid vehicle
- Work collaboratively with others when driving a commercial heavy rigid vehicle
- Operate electronic communication equipment to required protocol
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when driving a commercial heavy rigid vehicle in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events
- Apply precautions and required action to minimise, control or eliminate hazards that may exist when driving a commercial heavy rigid vehicle
- Monitor and anticipate traffic hazards and take appropriate action
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of the vehicle and its equipment and take appropriate action where required
- Carry out pre-operational checks in the course of work activities

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

- | | |
|---|---|
| Critical aspects for assessment and evidence required to demonstrate competency in this unit | <ul style="list-style-type: none"> • The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying: <ul style="list-style-type: none"> • the underpinning knowledge and skills • relevant legislation and workplace procedures • other relevant aspects of the range statement |
| Context of and specific resources for assessment | <ul style="list-style-type: none"> • Performance is demonstrated consistently over a period of time and in a suitable range of contexts • Resources for assessment include: <ul style="list-style-type: none"> • a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or • access to an appropriate range of relevant operational situations in the workplace • In both real and simulated environments, access is required to: <ul style="list-style-type: none"> • relevant and appropriate materials and equipment, and • applicable documentation including workplace procedures, regulations, codes of practice and operation manuals |
| Method of assessment | <ul style="list-style-type: none"> • Assessment of this unit must be undertaken by a registered training organisation • As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests • Practical assessment must occur: <ul style="list-style-type: none"> • through activities in an appropriately simulated environment at the registered training organisation, and/or • in an appropriate range of situations in the workplace |

Range Statement

RANGE STATEMENT

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Type of vehicle includes:
- all heavy rigid vehicles, for example any rigid vehicle with 3 or more axles, including trucks or buses, greater than 8 tonnes GVM
- Driving may be carried out in typical road transport situations, including:
- operations conducted at day or night
 - typical weather conditions
 - on the open road
 - on a private road
 - while at a depot, base or warehouse
 - while at a client's workplace or work site
- Vehicle handling procedures may include:
- starting a vehicle
 - steering and manoeuvring a vehicle
 - accelerating and braking
 - positioning and stopping a vehicle
 - reversing a vehicle
 - operating vehicle controls, instruments and indicators
 - using air brakes
 - using defensive driving techniques
 - managing engine performance
- Pre-operational checks may include:
- visual check of vehicle
 - checking and topping up of fluid levels
 - checks of tyre pressures
 - checks of operation of vehicle lights and indicators
 - checks of brakes
- Minor routine repairs may include:
- replacement of blown globes in vehicle lights
 - replacement of broken fan belt
 - replacement of blown fuse
 - replacement of door mirrors
 - repairs to rear tail-light lens
 - changing of tyres
 - repair of tyre punctures
 - replacement of broken coolant hose
- Driving hazards may include (examples only):
- wet and iced roads
 - oil on road
 - animals and objects on road
 - fire in vehicle
 - leaking fuel
 - faulty brakes

RANGE STATEMENT

- parked vehicles on the road
 - faulty steering mechanism on vehicle
 - pedestrians crossing the road
 - flooded sections of road
 - windy sections of road
 - foggy conditions
 - work site hazards including power and service lines, buildings, structures, facilities, underground services, uneven or unstable ground and recently filled trenches, stationary and moving machinery and equipment, hazardous or dangerous materials, noise, light, energy sources, and obstructions
- Factors that can cause traffic delays and diversions may include:
- traffic accidents
 - flooded sections of road
 - road damage
 - bridge/tunnel damage
 - road works
 - building construction
 - emergency situations such as bushfires, building fires, etc.
 - road closures for special events such as marches, parades, sporting events, etc.
 - holiday traffic
 - road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Documentation/records may include:
- state/territory heavy rigid vehicle driving licence and permit requirements
 - state/territory road rules
 - workplace driving instructions and procedures
 - vehicle manufacturers instructions, specifications and recommended driving procedures including preoperational checks of vehicle
 - emergency procedures
 - vehicle log book or record book (where required)
 - relevant standards and certification requirements
 - quality assurance procedures
- Applicable procedures and codes may include:
- relevant state/territory roads and traffic authority driving regulations and licence/permit requirements pertaining to

RANGE STATEMENT

heavy rigid vehicles

- relevant state/territory road rules
- relevant state/territory permit regulations and requirements
- relevant state/territory OH&S legislation
- relevant state/territory fatigue management regulations
- relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field C - Vehicle Operation

TLIC3005A Drive heavy combination vehicle

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to drive a heavy combination vehicle safely including systematic and efficient control of all vehicle functions, monitoring of traffic and road conditions, management of vehicle condition and performance, coupling and uncoupling of trailer, and effective management of hazardous situations. Assessment of this unit may be undertaken within a licensing examination conducted, by or under the authority of, the relevant state/territory Road Traffic Authority. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Driving must be carried out in compliance with the licence requirements and regulations of the relevant state/territory roads and traffic authority pertaining to heavy combination vehicles.

Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes.

Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial heavy combination vehicle across a variety of driving contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

1 Drive the heavy combination vehicle

PERFORMANCE CRITERIA

- 1.1 The heavy combination vehicle is started, steered, manoeuvred, positioned and stopped in accordance with traffic regulations and manufacturers instructions
- 1.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage
- 1.3 Engine operation is maintained within the manufacturer's specified torque range and temperature through effective gear selection and smooth transition in gear changes
- 1.4 Braking system of heavy combination vehicle is managed and operated to ensure effective control of the vehicle under all conditions
- 1.5 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving
- 1.6 The heavy combination vehicle is driven in reverse, maintaining visibility and achieving accurate positioning
- 1.7 The heavy combination vehicle is parked, uncoupled, shut down and secured in accordance with manufacturers specifications, traffic regulations and workplace procedures
- 1.8 Where required, overwidth and overweight permit applications are undertaken in accordance with relevant regulatory requirements
- 1.9 Appropriate signage, lights and the like are checked for

ELEMENT	PERFORMANCE CRITERIA
	operational effectiveness and for conformity to prescribed traffic regulations
	1.10 Appropriate procedures are followed in the event of a driving emergency
2 Monitor traffic and road conditions	2.1 The most efficient route of travel is taken through monitoring and anticipation of traffic flows and conditions, road standards and other factors likely to cause delays or route deviations
	2.2 Traffic and road conditions are constantly monitored and acted upon to enable safe operation and ensure no injury to people or damage to property, equipment loads and facilities
3 Monitor and maintain vehicle performance	3.1 Vehicle performance is maintained through pre-operational inspections and checks of the vehicle
	3.2 Prime mover and trailer are aligned and coupled in accordance with manufacturers instructions and workplace procedures
	3.3 Coupled vehicle is checked and tested to ensure it is correctly secured and to confirm that it is fully operational
	3.4 Performance and efficiency of vehicle operation is monitored during use
	3.5 Defective or irregular performance or malfunctions are reported to the appropriate authority
	3.6 Vehicle records are maintained/updated and information is processed in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements of the relevant state/territory road traffic authority
- Relevant OH&S and environmental procedures and regulations
- Heavy combination vehicle controls, instruments and indicators and their use
- Heavy combination vehicle handling procedures
- Workplace driving and operational instructions
- Procedures to be followed in the event of a driving emergency
- Engine power management and safe driving strategies

REQUIRED KNOWLEDGE AND SKILLS

- Efficient driving techniques
- Pre-operational checks carried out on heavy combination vehicle and related action
- Differences between transmission types
- Principles of operation of air brakes and procedures for their use
- Driving hazards and related defensive driving techniques
- Map reading and navigation of the vehicle and related action
- Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- Principles of stress management when driving a vehicle
- Causes and effects of fatigue on drivers
- Factors which increase fatigue-related accidents
- Fatigue management strategies including on-road techniques
- Lifestyles which promote the effective long-term management of fatigue

Required skills:

- Communicate effectively with others when driving a heavy combination vehicle
- Read and interpret instructions, procedures, information and signs relevant to the driving of a heavy combination vehicle
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the driving of a heavy combination vehicle
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when driving a heavy combination vehicle
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when driving a heavy combination vehicle in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when driving a heavy combination vehicle
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- Monitor and anticipate traffic hazards and take appropriate action
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Required skills:

- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Apply map reading and road navigation techniques to the operation of a heavy combination vehicle
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of vehicle, its trailers and its equipment and take appropriate action where required
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

EVIDENCE GUIDE

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Type of vehicle includes:

- all heavy combination vehicles that may be driven on public and private roads and work sites

Driving may be carried out in typical road transport situations, including:

- operations conducted at day or night
- typical weather conditions
- on the open road
- on a private road
- while at a depot, base or warehouse
- while at a client's workplace or work site

Vehicle handling procedures may include:

- starting a vehicle
- steering and manoeuvring a vehicle
- accelerating and braking
- positioning and stopping a vehicle
- reversing a vehicle
- operating vehicle controls, instruments and indicators
- using air brakes
- using defensive driving techniques
- managing engine performance

Pre-operational checks may include:

- visual check of vehicle
- checking and topping up of fluid levels
- checks of tyre pressures
- checks of operation of vehicle lights and indicators
- checks of brakes

RANGE STATEMENT

- Minor routine repairs may include:
- checks of coupling equipment
 - replacement of blown globes in vehicle lights
 - replacement of broken fan belt
 - replacement of blown fuse
 - replacement of door mirrors
 - repairs to rear tail-light lens
 - changing of tyres
 - repair of tyre punctures
 - replacement of broken coolant hose
- Driving hazards may include (examples only):
- wet and iced roads
 - oil on road
 - animals and objects on road
 - fire in vehicle
 - leaking fuel
 - faulty brakes
 - parked vehicles on the road
 - faulty steering mechanism on vehicle
 - pedestrians crossing the road
 - flooded sections of road
 - windy sections of road
 - foggy conditions
 - work site hazards including power and service lines, buildings, structures, facilities, underground services, uneven or unstable ground and recently filled trenches, stationary and moving machinery and equipment, hazardous or dangerous materials, noise, light, energy sources, and obstructions
- Factors that can cause traffic delays and diversions may include (examples only):
- traffic accidents
 - flooded sections of road
 - road damage
 - bridge/tunnel damage
 - road works
 - building construction
 - emergency situations such as bushfires, building fires, etc.
 - road closures for special events such as marches, parades, sporting events, etc.
 - holiday traffic
 - road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.
- Depending on the type of organisation concerned and the
- company procedures
 - enterprise procedures

RANGE STATEMENT

local terminology used, workplace procedures may include:

- organisational procedures
- established procedures

Documentation/records may include:

- state/territory heavy combination vehicle driving licence/permit requirements
- state/territory road rules
- workplace driving instructions and procedures
- vehicle manufacturers instructions, specifications and recommended driving procedures including preoperational checks of vehicle
- emergency procedures
- vehicle log book or record book (where required)

Applicable procedures and codes may include:

- relevant state/territory roads and traffic authority driving regulations and licence requirements pertaining to heavy combination vehicles
- relevant state/territory road rules
- relevant state/territory permit regulations and requirements
- relevant state/territory OH&S legislation
- relevant state/territory fatigue management regulations
- relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

C - Vehicle Operation

TLIC3063A Operate vehicle carrying special loads

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to drive a vehicle carrying a special load safely including compliance with road traffic authority and other relevant government regulations and company policies; and effective management of hazardous situations. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Driving must be carried out in compliance with the licence and permit requirements and regulations of the relevant state/territory roads and traffic authority as well as the specific regulatory and permit requirements pertaining to the special load being carried.

Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes.

Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial vehicle carrying a special load across a variety of driving contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Carry out pre-operational checks

- 1.1 The pre-operational checks for the special purpose vehicle and its associated ancillary equipment are carried out in accordance with manufacturers requirements, government regulations and workplace policies and procedures
- 1.2 All faults and defects identified during checks are repaired or reported in accordance with workplace procedures

2 Drive a vehicle carrying special loads

- 2.1 The vehicle is manoeuvred in accordance with the regulations/permit requirements for the class of vehicle involved and the load being carried
- 2.2 Vehicles carrying explosives or dangerous goods are driven along designated routes in accordance with the relevant codes, relevant government regulations and workplace policies
- 2.3 The load is transported and the vehicle manoeuvred in accordance with any required precautions relating to unusual/special characteristics of the load and/or relevant government regulations pertaining to the special load including the Australian Dangerous Goods Code and the Australian Explosives Code
- 2.4 Signs or indicators are fixed to the vehicle if required
- 2.5 Appropriate procedures are followed for the load concerned in the event of a driving emergency

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements of the relevant state/territory road traffic authority
- Where applicable, Australian regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including the Australian Dangerous Goods Code and the Australian Explosives Code
- Relevant OH&S and environmental procedures and regulations
- Vehicle controls, instruments and indicators and their use
- Workplace driving and operational instructions
- Procedures to be followed in the event of a driving emergency
- Engine power management and safe driving strategies
- Efficient driving techniques
- Pre-operational checks carried out on vehicle and related action
- Differences between transmission types
- Map reading and road navigation techniques
- Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- Principles of stress management when driving a vehicle
- Causes and effects of fatigue on drivers
- Factors which increase fatigue-related accidents
- Fatigue management strategies including on-road techniques
- Lifestyles which promote the effective long-term management of fatigue

Required skills:

- Communicate effectively with others when driving a vehicle designed to carry special loads
- Read and interpret instructions, procedures, information and signs relevant to the driving of a vehicle designed to carry special loads
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the driving of a vehicle designed to carry special loads
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when driving a vehicle designed to carry special loads
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

Required skills:

- Promptly report and/or rectify any identified problems, faults or malfunctions that may arise when driving a vehicle designed to carry special loads in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events when driving a vehicle designed to carry special loads
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the driving of a vehicle designed to carry special loads
- Monitor and anticipate traffic hazards and take appropriate action
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of vehicle and its equipment and load and take appropriate action if required
- Service vehicle and its equipment in terms of maintenance schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources

- Performance is demonstrated consistently over a period

EVIDENCE GUIDE

for assessment

of time and in a suitable range of contexts

- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Type of vehicle includes:

- all vehicles designed to carry special loads, for example concrete agitator, livestock transporter, armoured car, tanker, refrigerated vehicle, waste vehicle, fresh produce vehicle, car carrier, container carrier, recovery vehicle

Driving may be carried out in typical road transport situations, including:

- operations conducted at day or night
- typical weather conditions
- on the open road
- on a private road
- while at a depot, base or warehouse

RANGE STATEMENT

- Vehicle handling procedures may include:
- while at a client's workplace or work site
 - starting a vehicle
 - steering and manoeuvring a vehicle
 - accelerating and braking
 - positioning and stopping a vehicle
 - reversing a vehicle
 - operating vehicle controls, instruments and indicators
 - using defensive driving techniques
 - managing engine performance
- Pre-operational checks may include:
- visual check of vehicle
 - checking and topping up of fluid levels
 - checks of tyre pressures
 - checks of operation of vehicle lights and indicators
 - checks of brakes
- Minor routine repairs may include:
- replacement of blown globes in vehicle lights
 - replacement of broken fan belt
 - replacement of blown fuse
 - replacement of door mirrors
 - repairs to rear tail-light lens
 - changing of tyres
 - repair of tyre punctures
 - replacement of broken coolant hose
- Designated routes are:
- those that are determined by permit/regulatory requirements for a specific class of load such as explosives or dangerous goods
- Driving hazards may include (examples only):
- wet and iced roads
 - oil on road
 - animals and objects on road
 - fire in vehicle
 - leaking fuel
 - faulty brakes
 - parked vehicles on the road
 - faulty steering mechanism on vehicle
 - pedestrians crossing the road
 - flooded sections of road
 - windy sections of road
 - foggy conditions
- Factors that can cause traffic delays and diversions may include (examples only):
- traffic accidents
 - flooded sections of road
 - road damage

RANGE STATEMENT

- bridge/tunnel damage
 - road works
 - building construction
 - emergency situations such as bushfires, building fires, etc
 - road closures for special events such as marches, parades, etc
 - holiday traffic
 - road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Documentation/records may include:
- state/territory driving licence requirements
 - state/territory road rules
 - workplace driving instructions and procedures for drivers of vehicles carrying the specific load concerned
 - vehicle manufacturers instructions, specifications and recommended driving procedures including preoperational checks of vehicle
 - procedures/designated routes prescribed by the relevant authority for vehicles carrying the specific loads concerned
- Applicable procedures and codes may include:
- relevant state/territory roads and traffic authority driving regulations and licence/permit requirements pertaining to the class of vehicle
 - relevant regulations/permit requirements specific to the load being carried
 - Australian regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including the Australian Dangerous Goods Code and the Australian Explosives Code
 - relevant state/territory road rules
 - relevant state/territory OH&S legislation
 - relevant state/territory fatigue management regulations
 - relevant State/Territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field C - Vehicle Operation

TLIC4006A Drive multi-combination vehicle

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to drive a multi-combination vehicle safely, including systematic and efficient control of all vehicle functions, coupling and uncoupling of dollies, monitoring of traffic and road conditions, management of vehicle condition and performance, and effective management of hazardous situations. Assessment of this unit may be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory Road Traffic Authority. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Driving must be carried out in compliance with the licence requirements and regulations of the relevant state/territory roads and traffic authority pertaining to multi-combination vehicles.

Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes.

Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial multi-combination vehicle across a variety of driving contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

1 Drive the multi-combination vehicle

PERFORMANCE CRITERIA

- 1.1 The multi-combination vehicle is started, steered, manoeuvred, positioned and stopped in accordance with traffic regulations and manufacturers instructions
- 1.2 Engine power is managed to ensure efficiency and performance and to minimise engine and transmission damage
- 1.3 Braking system of multi-combination vehicle is managed and operated to ensure effective control of the vehicle under all conditions
- 1.4 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving
- 1.5 The multi-combination vehicle is driven in reverse, maintaining visibility and achieving accurate positioning
- 1.6 The multi-combination vehicle is parked, shut down, uncoupled and secured according to manufacturers specifications, traffic regulations and workplace procedures
- 1.7 Appropriate signage, lights and the like are checked for operational effectiveness and for conformity to prescribed traffic regulations
- 1.8 Appropriate procedures are followed in the event of a driving emergency

2 Monitor traffic and road conditions

- 2.1 The most efficient and permissible route of travel is taken through monitoring and anticipation of traffic flows and

ELEMENT	PERFORMANCE CRITERIA
3 Monitor and maintain vehicle performance	<p>conditions, road standards and other factors likely to cause delays or route deviations</p> <p>2.2 Traffic and road conditions are constantly monitored and acted upon to enable safe operation and to ensure no injury to people or damage to property, equipment, loads and facilities</p> <p>3.1 Vehicle performance is maintained through pre-operational inspections and checks of the vehicle</p> <p>3.2 Prime mover, dollies and trailer are aligned and coupled in proper sequence in accordance with manufacturers instructions and workplace procedures</p> <p>3.3 Coupled vehicle is checked and tested to ensure it is correctly secured and to confirm that it is fully operational</p> <p>3.4 Performance and efficiency of vehicle operation is monitored during use</p> <p>3.5 Defective or irregular performance or malfunctions are reported to the appropriate authority</p> <p>3.6 Vehicle records are maintained/updated and information is processed in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements of the relevant state/territory road traffic authority
- Relevant OH&S and environmental procedures and regulations
- Multi-combination vehicle controls, instruments and indicators and their use
- Multi-combination vehicle handling procedures
- Workplace driving and operational instructions
- Engine power management and safe driving strategies
- Efficient driving techniques
- Pre-operational checks carried out on multi-combination vehicle and related action
- Differences between transmission types
- Principles of operation of air brakes and procedures for their use
- Driving hazards and related defensive driving techniques

REQUIRED KNOWLEDGE AND SKILLS

- Map reading and road navigation techniques
- Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- Principles of stress management when driving a vehicle
- Causes and effects of fatigue on drivers
- Factors which increase fatigue-related accidents
- Fatigue management strategies including on-road techniques
- Lifestyles which promote the effective long-term management of fatigue

Required skills:

- Communicate effectively with others when driving a multi-combination vehicle
- Read and interpret instructions, procedures, information and signs relevant to the driving of a multi-combination vehicle
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the driving of a multi-combination vehicle
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when driving a multi-combination vehicle
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when driving a multi-combination vehicle in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events when driving a multi-combination vehicle
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the driving of a multi-combination vehicle
- Monitor and anticipate traffic hazards and take appropriate action
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of vehicle, its trailers and its equipment and take appropriate action where required

Required skills:

- Service vehicle and its equipment in terms of maintenance schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated

EVIDENCE GUIDE

environment at the registered training organisation, and/or

- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Type of vehicle includes:

- all multi-combination vehicles that may be driven on public and private roads and work sites

Driving may be carried out in typical road transport situations, including:

- operations conducted at day or night
- typical weather conditions
- on the open road
- on a private road
- while at a depot, base or warehouse
- while at a client's workplace or work site

Vehicle handling procedures may include:

- starting a vehicle
- steering and manoeuvring a vehicle
- accelerating and braking
- positioning and stopping a vehicle
- reversing a vehicle
- operating vehicle controls, instruments and indicators
- using air brakes
- using defensive driving techniques
- managing engine performance

Pre-operational checks may include:

- visual check of vehicle
- checking and topping up of fluid levels
- checks of tyre pressures
- checks of operation of vehicle lights and indicators
- checks of brakes
- checks of coupling equipment

Minor routine repairs may include:

- replacement of blown globes in vehicle lights
- replacement of broken fan belt
- replacement of blown fuse
- replacement of door mirrors
- repairs to rear tail-light lens

RANGE STATEMENT

Driving hazards may include (examples only):

- changing of tyres
- repair of tyre punctures
- replacement of broken coolant hose
- wet and iced roads
- oil on road
- animals and objects on road
- fire in vehicle
- leaking fuel
- faulty brakes
- parked vehicles on the road
- faulty steering mechanism on vehicle
- pedestrians crossing the road
- flooded sections of road
- windy sections of road
- foggy conditions

Factors that can cause traffic delays and diversions may include (examples only):

- traffic accidents
- flooded sections of road
- road damage
- bridge/tunnel damage
- road works
- building construction
- emergency situations such as bushfires, building fires, etc.
- road closures for special events such as marches, parades, etc.
- holiday traffic
- road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Documentation/records may include:

- state/territory multi-combination vehicle driving licence/permit requirements
- state/territory road rules
- workplace driving instructions and procedures
- vehicle manufacturers instructions, specifications and recommended driving procedures including preoperational checks of vehicle
- emergency procedures
- vehicle log book or record book (where required)

RANGE STATEMENT

Applicable procedures and codes may include:

- relevant state/territory roads and traffic authority driving regulations and licence/permit requirements pertaining to multi-combination vehicles
- relevant state/territory road rules
- relevant state/territory OH&S legislation
- relevant state/territory fatigue management regulations
- relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field C - Vehicle Operation

TLID1001A Shift materials safely using manual handling methods

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to shift loads using manual handling methods, including assessing the risks associated with relocating the load, planning the relocation process and carrying out the relocation in accordance with the plan. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the relevant OH&S regulations concerning the manual handling and movement of loads.

Work is performed under some supervision generally within a team environment.

Work involves the application of the basic principles for the safe manual handling techniques and movement of loads when shifting materials using manual handling methods as part of day-to-day work.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Assess risks associated with the relocation of the load

- 1.1 Products, goods or materials to be relocated are identified and assessed for the appropriate method of relocation
- 1.2 Locations for storage are determined and potential routes to be followed are identified
- 1.3 Effect of load relocation on original load base is predicted
- 1.4 Points of balance are estimated
- 1.5 Required clearances are compared to available space and adjustments are made
- 1.6 Effects of moving contents which may be loose, liquid, dangerous or hazardous are considered
- 1.7 Potential risks in route(s) which may be followed are considered
- 1.8 Risks to self are identified arising from the required lifting, load carrying, set down or movement of the goods
- 1.9 Manual handling procedures for lifting, lowering and carrying, pushing and pulling are identified
- 1.10 Team lifting processes are considered for application
- 1.11 Appropriate personal protective equipment is worn
- 1.12 Size to weight ratio of items to be manually handled are identified

2 Plan load relocation

- 2.1 Relocation of the load is planned consistent with the code of practice for manual handling
- 2.2 Process for relocating load is proposed including predicting and planning for potential difficulties
- 2.3 Proposed process is checked against code of practice and workplace procedures for compliance

ELEMENT	PERFORMANCE CRITERIA
3 Relocate load	<p>3.1 Actions for lifting, lowering and carrying, pulling and pushing a load are in accordance with workplace procedures and OH&S requirements</p> <p>3.2 Applications appropriate for team relocation of load are identified</p> <p>3.3 Team lifting tasks are coordinated</p> <p>3.4 Planned process and route are followed</p> <p>3.5 Relocated materials are set down without damage to goods, personnel or equipment and checked for stability</p> <p>3.6 Relocation is checked to see that it meets work requirements, with any variance(s) reported</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant OH&S procedures and guidelines concerning the manual lifting and movement of loads
- Risks when manually lifting and handling materials and goods and related precautions to control the risk, including: the load on the spine during lifting; controlled actions on a movement during lifting; rotation and side movement of the spine during lifting; postures and positions during lifting; work layout; the type, weight and position of the load; frequency of shifting operations; distance over which load is to be shifted; and time allowed for the shifting of the load
- Workplace procedures and policies for manual handling
- Housekeeping standards procedures required in the workplace
- Site layout and obstacles

Required skills:

- Communicate effectively with others when manually lifting and handling materials and goods
- Read and interpret instructions, procedures and information relevant to the manual lifting and handling of materials and goods
- Interpret and follow operational instructions and prioritise work
- Work collaboratively with others when manually lifting and handling materials and goods

Required skills:

- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when manually lifting and handling materials and goods in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected situations that may occur when manually lifting and handling materials and goods
- Apply precautions and required action to minimise, control or eliminate risks that may exist when manually lifting and handling materials and goods
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in loads and materials in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of:
 - applying the underpinning knowledge and skills
 - interpreting manual handling risks
 - using correct manual handling practices
 - applying relevant legislation and workplace procedures

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts

EVIDENCE GUIDE

- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- As a minimum, assessment of knowledge must be conducted through appropriate assessments using written/practical/oral assessments
- Practical assessment must occur:
 - through activities in an appropriately simulated environment, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

The shifting operations may be conducted:

- in a range of work environments
- by day or night

Customers may be:

- internal or external

Workplaces may comprise:

- large, medium or small worksites

Work may be conducted in:

- restricted spaces
- exposed conditions
- controlled or open environments

Materials to be shifted may include:

- goods
- large luggage items
- baggage items

RANGE STATEMENT

- equipment and tools
 - cleaning materials
 - components and parts of vehicles and equipment such as tyres, batteries, lifting gear, etc.
 - materials used in the course of work such as drums of fuel, raw materials, packaging, etc.
- Loads to be shifted may be:
- irregularly shaped
 - packaged or unpackaged
 - labelled or unlabelled
- Hazards in the work area may include exposure to:
- chemicals
 - dangerous or hazardous substances
 - movements of equipment, goods and materials
 - weight of items being handled
- Personnel in the work area may include:
- workplace personnel
 - site visitors
 - contractors
 - official representatives
- Communication in the work area may include:
- phone
 - electronic data interchange
 - fax
 - email
 - internet
 - radio
 - oral, aural or signed communications
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - high visibility clothing
- Information/documents may include:
- goods identification numbers and codes
 - manifests, bar codes, goods and container identification
 - manufacturers specifications for equipment/tools
 - workplace procedures and policies
 - supplier and/or client instructions
 - material safety data sheets
 - codes of practice including the National Standards for

RANGE STATEMENT

Applicable regulations and legislation may include:

- Manual Handling and the Industry Safety Code
- relevant legislation, regulations and related documentation
 - award, enterprise bargaining agreement, other industrial arrangements
 - standards and certification requirements
 - quality assurance procedures
 - emergency procedures
 - relevant state/territory OH&S legislation
 - relevant state/territory environmental protection legislation
 - workplace relations regulations
 - workers compensation regulations
 - licence, patent or copyright arrangements
 - dangerous goods and air freight regulations
 - export/import/quarantine/bond requirements
 - marine orders

Unit Sector(s)

Not Applicable

Competency Field

Competency Field D - Load Handling

TLID2004A Load and unload goods/cargo

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to load and unload goods and cargo, including loading and unloading goods, securing and protecting the load and completing all required documentation. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the relevant regulations/permit requirements including those of the relevant state/territory roads and traffic authority concerning the loading of goods/cargo.

Work is performed under some supervision generally within a team environment. It involves the application of the basic principles, routine procedures and regulatory/permit requirements to the loading and unloading of goods/cargo.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Load and unload goods/cargo

- 1.1 Load characteristics are identified and taken into account when determining appropriate loading and unloading procedures
- 1.2 Dangerous or hazardous goods are identified and handled in accordance with the Australian Dangerous Goods (ADG) Code and other relevant regulations/permit requirements
- 1.3 Load is packed/unpacked to make safe and effective use of available spaces
- 1.4 Goods/cargo are loaded in accordance with relevant mass and loading regulations and workplace procedures
- 1.5 Lifting aids and appliances are selected and used to aid loading procedures in compliance with workplace procedures and safety legislation
- 1.6 Unloading activities are conducted in a safe and efficient manner taking into account suitable locations, stowage, safe use of equipment and the balance of the remaining load
- 1.7 Goods requiring special handling and/or documentation are identified and appropriate procedures followed
- 1.8 Relocated material is restacked appropriate for the transport method, safe height, weight loading, size and crushability of the goods

2 Secure and protect load

- 2.1 The distribution of the load is checked to ensure that it is even, legal and within safe working capacity
- 2.2 Load is checked to ensure that dangerous goods and hazardous substances are appropriately segregated in accordance with the ADG Code
- 2.3 Load is secured using the correct load restraint and protection equipment for different loads, carrying and storage conditions
- 2.4 The load is protected in accordance with legal and workplace safety requirements

3 Complete

- 3.1 The load is inspected and checked for security to travel in

ELEMENT	PERFORMANCE CRITERIA
documentation	accordance with relevant regulations/permit requirements and the ADG Code where applicable 3.2 All required documentation for the goods is completed in accordance with workplace requirements including the ADG Code where applicable

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant Australian standards and regulations including state/territory mass and loading regulations
- National Load Restraint Guide
- Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
- OH&S procedures and guidelines concerning the lifting and movement of loads
- Risks when loading and unloading goods/cargo and related precautions to control the risk
- Security awareness requirements when loading and unloading vehicles and in particular the recognition, isolation and reporting of suspicious cargo and goods
- Workplace procedures and policies for the loading and unloading of goods/cargo
- Housekeeping standards procedures required in the workplace
- Methods of securing a load
- Site layout and obstacles
- Problems that may arise when loading and unloading goods and cargo and actions that should be taken to prevent or solve them

Required skills:

- Communicate effectively with others when loading and unloading goods and cargo
- Read and interpret instructions, procedures, information, signs and labels relevant to the loading and unloading of goods and cargo
- Identify containers and goods coding, ADG and IMDG markings and, where applicable, emergency information panels and take appropriate action
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the loading and unloading of goods and cargo

Required skills:

- Operate electronic communication equipment to required protocol
- Estimate the size, shape and special requirements of loads and take appropriate action
- Work collaboratively with others when loading and unloading goods and cargo
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when loading and unloading goods and cargo in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected situations that may occur when loading and unloading goods and cargo
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the loading and unloading of goods and cargo
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in cargo and equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts

EVIDENCE GUIDE

for assessment

- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Operations may be conducted:

- in a range of work environments
- by day or night

Customers may be:

- internal or external

Workplaces may comprise:

- large, medium or small worksites

Work may be conducted in:

- restricted spaces
- exposed conditions
- controlled or open environments

Goods/cargo to be loaded or

- require special precautions

RANGE STATEMENT

unloaded may:

Loads to be shifted may be:

- irregularly shaped
- packaged or unpackaged
- labelled or unlabelled
- palleted or unpalleted

Hazards in the work area may include exposure to:

- chemicals
- dangerous or hazardous substances
- movements of equipment, goods and materials

Personnel in the work area may include:

- workplace personnel
- site visitors
- contractors
- official representatives

Communication in the work area may include:

- phone
- electronic data interchange
- fax
- email
- internet
- radio
- oral, aural or signed communications

Loading operations may be carried out:

- manually
- with the aid of lifting equipment and/or appliances

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Personal protective equipment may include:

- gloves
- safety headwear and footwear
- safety glasses
- two-way radios
- high visibility clothing

Information/documents may include:

- goods identification numbers and codes, including ADG and IMDG markings and HAZCHEM signs
- manifests, bar codes, goods and container identification
- manufacturers specifications for equipment/tools
- workplace procedures and policies for the loading and unloading of goods/cargo
- ADG Code and associated regulations
- supplier and/or client instructions
- material safety data sheets

RANGE STATEMENT

Applicable regulations and legislation may include

- EPGs and Initial Response Guide (HB76:1998 or equivalent)
- codes of practice including the National Standards for Manual Handling and the Industry Safety Code
- award, enterprise bargaining agreement, other industrial arrangements
- relevant Australian standards and certification requirements
- quality assurance procedures
- emergency procedures
- Load Restraint Guide
- relevant Australian standards and regulations including state/territory mass and loading regulations
- Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - Australian and International Dangerous Goods Codes
 - Australian Marine Orders and the International Maritime Dangerous Goods Code
 - IATA Dangerous Goods by Air regulations
 - Australian and International Explosives Codes
- relevant state/territory environmental protection legislation
- relevant state/territory OH&S legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

D - Load Handling

TLID2010A Operate a forklift

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to operate a forklift, including checking forklift condition, driving the forklift to fulfil operational requirements, monitoring site conditions, and monitoring and maintaining forklift performance. Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory OH&S authority. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Operation of a forklift must be carried out in compliance with the licence requirements and regulations of the relevant state/territory authority.

Operation of a forklift is performed under some supervision, generally within a team environment. It involves the application of routine equipment operation principles and procedures to maintain the safety and operation of a forklift in a variety of operational contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1 Check forklift condition | <p>1.1 Condition of forklift is checked for compliance with OH&S and workplace requirements for warning devices, manufacturers specifications and the nature of the load shifting task</p> <p>1.2 Attachments are checked to ensure appropriate adjustment and operation</p> <p>1.3 Mirrors and seats are adjusted for safe operation by the driver</p> <p>1.4 Log books are checked and appropriate workplace documentation is completed in accordance with workplace requirements</p> |
| 2 Drive the forklift | <p>2.1 Forklift is started, steered, manoeuvred, positioned and stopped in accordance with regulations and manufacturers instructions</p> <p>2.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage</p> <p>2.3 Operational hazards are identified and/or anticipated and avoided or controlled through defensive driving and appropriate hazard control techniques</p> <p>2.4 Forklift is driven in reverse, maintaining visibility and achieving accurate positioning</p> <p>2.5 The forklift is parked, shut down and secured in accordance with manufacturers specifications, regulations and workplace procedures</p> |
| 3 Operate a forklift to handle loads | <p>3.1 The lifting task to be undertaken is appropriately planned and the correct lifting truck and attachments are selected</p> <p>3.2 The load is lifted, carried, lowered and set down in accordance with OH&S legislation, manufacturers specifications and company procedures</p> |

ELEMENT	PERFORMANCE CRITERIA
4 Monitor site conditions	4.1 When selecting the most efficient route, hazards and traffic flow are identified and appropriate adjustments are made 4.2 Site conditions are assessed to enable safe operations and to ensure no injury to people or damage to property, equipment, loads or facilities occurs
5 Monitor and maintain forklift performance	5.1 Performance and efficiency of vehicle operation is monitored during use 5.2 Defective/irregular performance and malfunctions reported to relevant personnel 5.3 Forklift records are maintained/updated in accordance with workplace procedures and legislative requirements

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant duty of care requirements pertaining to the operation of a forklift
- Relevant OH&S and environmental procedures and regulations
- Workplace operating procedures
- Forklift controls, instruments and indicators and their use
- Forklift handling procedures
- Procedures to be followed in the event of an operational emergency
- Engine power management and safe operating strategies
- Efficient driving techniques
- Operating hazards and related defensive driving and hazard control techniques
- Pre-operational checks carried out on forklift and related action
- Principles of stress management when driving a forklift
- Site layout and obstacles

Required skills:

- Communicate effectively with others when operating a forklift
- Read and interpret instructions, procedures, information and signs relevant to the operation of a forklift

Required skills:

- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the operation of a forklift
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when operating a forklift
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events when operating a forklift
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the operation of a forklift
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Identify points of balance and safe lifting positions on a range of loads when operating a forklift (including accessories)
- Monitor performance of forklift and its equipment and take appropriate action where required
- Ensure that a forklift and its equipment are maintained in terms of service schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the

EVIDENCE GUIDE

demonstrate competency in this unit

requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Types of forklift may include:

- counterbalance trucks
- reach trucks
- pallet trucks

RANGE STATEMENT

- Operations may be carried out in typical forklift operational situations, including:
- operations conducted at day or night
 - typical weather conditions
 - on the open road
 - on a private road or worksite
 - while at a workplace
- Customers may be:
- internal or external
- Workplaces may comprise:
- large, medium or small worksites
- Work may be conducted in:
- restricted spaces
 - exposed conditions
 - controlled or open environments
- Loads to be shifted may require:
- special precautions
- Loads to be shifted may be:
- irregularly shaped
 - packaged or unpackaged
 - labelled or unlabelled
 - palleted or unpalleted
 - chemicals
 - dangerous or hazardous substances
 - movements of equipment, goods and materials
- Hazards in the work area may include exposure to:
- workplace personnel
 - site visitors
 - contractors
 - official representatives
- Forklift handling procedures may include:
- starting a forklift
 - steering and manoeuvring a forklift
 - accelerating and braking
 - positioning and stopping a forklift
 - reversing a forklift
 - operating forklift controls, instruments and indicators
 - using defensive driving techniques
 - managing engine performance
- Pre-operational checks may include:
- visual check of forklift
 - checking and topping up of fluid levels
 - checks of tyres
 - checks of operation of forklift lights and indicators
 - checks of brakes
- Hazards may include (examples only):
- wet and iced operating surfaces
 - oil on operating surface

RANGE STATEMENT

- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- faulty brakes
 - workplace obstacles and other operational equipment and vehicles
 - damaged loads and pallets
 - other personnel in work area
 - company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Personal protection equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - high visibility clothing
- Information/documents may include:
- goods identification numbers and codes, including IMDG markings and HAZCHEM signs
 - manifests, bar codes, picking slips, merchandise transfers, stock requisitions, goods and container identification
 - Australian Standard 2359 - Industrial Truck Code
 - manufacturers specifications for forklift and associated equipment
 - operations and service record book or log
 - workplace procedures and policies for the operation of forklifts
 - supplier and/or client instructions
 - ADG Code and material safety data sheets
 - regulatory requirements concerning the use of forklifts
 - award, enterprise bargaining agreement, other industrial arrangements
 - standards and certification requirements
 - quality assurance procedures
 - emergency procedures
- Applicable procedures and codes may include:
- relevant state/territory regulations pertaining to the operation of forklifts
 - relevant codes and standards, including Australian Standard 2359 - Industrial Truck Code
 - relevant state/territory OH&S legislation
 - relevant state/territory fatigue management regulations
 - relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field D - Load Handling

TLID2012A Operate specialised load shifting equipment

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to operate specialised load shifting equipment in accordance with workplace requirements and relevant regulatory requirements, including planning work for the current working conditions; using controls and equipment operating systems to manage movement of the unit and accessory operations; locating load and identifying load characteristics; moving materials and loads; monitoring and operating controls; and stopping, parking and securing equipment after operation. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in accordance with codes, regulations, licence and/or permit and workplace requirements relevant to operation of the specialised load shifting equipment concerned.

Safety checks and equipment tests are performed under limited supervision.

Work involves the application of regulatory requirements and workplace procedures to the operation of specialised load shifting equipment in the stevedoring, transport, warehousing, distribution and/or storage industries.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Plan work for the current working conditions

- 1.1 Traffic flow and work area conditions are constantly assessed and anticipated to allow safe operation to ensure no injury to people, or damage to equipment, loads or facilities
- 1.2 Characteristics of the load are taken into account to ensure that, where applicable, appropriate attachments are used to transport the load
- 1.3 Any occurrences in the work area that may affect the safety and efficiency of operations are reported to the appropriate personnel

2 Use controls and equipment operating systems to manage movement of the unit and accessory operations

- 2.1 Equipment is prepared and any appropriate attachment fitted
- 2.2 Gear and operational levers are checked to ensure that they are in the neutral position prior to inserting ignition key and starting engine
- 2.3 Engine is started in accordance with manufacturers guidelines to bring the engine to speed
- 2.4 Instruments and gauges are monitored during start-up and operations to ensure that operation is within manufacturers specifications and enterprise safety requirements
- 2.5 Engine power is managed for efficiency of equipment movement and economy of equipment operations
- 2.6 Equipment operations are conducted within the manufacturer's specified torque range
- 2.7 Any faults or damage to equipment are immediately reported to the appropriate personnel

ELEMENT	PERFORMANCE CRITERIA
3 Locate load and identify load characteristics	<p>3.1 Load is located and identified according to instructions</p> <p>3.2 Loading and unloading plans are followed to ensure efficiency and safety of operations</p> <p>3.3 Characteristics of the load are taken into account to ensure that appropriate loading and unloading procedures are followed</p> <p>3.4 Hazardous goods are identified and relevant procedures are taken into account when planning and conducting the work</p> <p>3.5 Load weight and dimensions are within the capacity of the equipment</p>
4 Move materials and loads	<p>4.1 Equipment is manoeuvred and positioned using smooth and controlled movements</p> <p>4.2 Manoeuvres are within the limits of the equipment and in line with manufacturers specifications</p> <p>4.3 Materials are moved ensuring no injury to personnel or damage to equipment or goods</p>
5 Monitor and operate controls	<p>5.1 Equipment controls are monitored and operated in accordance with manufacturers operating instructions</p> <p>5.2 Control systems are understood and acted upon in accordance with statutory authority regulations, manufacturers guidelines and site operating procedures</p> <p>5.3 Control faults are identified and reported in accordance with manufacturers instructions and workplace guidelines</p>
6 Stop, park and secure equipment	<p>6.1 Equipment is brought to a controlled halt within manufacturers guidelines</p> <p>6.2 Equipment is parked without injury to personnel or damage to equipment, loads or facilities in accordance with company procedures</p> <p>6.3 Equipment is secured on a flat, even surface and not close to doorways, aisles, access-ways or blind corners and in accordance with securing procedures for the appropriate equipment</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

REQUIRED KNOWLEDGE AND SKILLS

- Regulations relevant to the operation of specialised load shifting equipment, including, where relevant, the ADG Code and relevant bond, quarantine or other legislative requirements
- Relevant OH&S and environmental protection procedures and guidelines
- Workplace procedures and policies for the operation of the specialised load shifting equipment
- Focus of operation of work systems, equipment, management and site operating systems for the operation of the specialised load shifting equipment
- The purpose, characteristics, capabilities, requirements and limitations of the specialised load shifting equipment
- Conveyed materials' potential for toxicity, reactivity, material grade, type and purpose including information from relevant material safety data sheets and ADG Code documentation (where applicable)
- Problems that may occur when operating specialised load shifting equipment and appropriate action that can be taken to resolve the problems
- Operational safety requirements and precautions for the specialised load shifting equipment concerned
- Documentation and record requirements
- Housekeeping standards procedures required in the workplace
- Site layout and obstacles
- Relevant permit and licence requirements

Required skills:

- Communicate effectively with others when operating specialised load shifting equipment
- Read and interpret instructions, procedures, information and signs relevant to work activities
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the operation of specialised load shifting equipment
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when operating specialised load shifting equipment
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may arise when operating specialised load shifting equipment in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events when operating specialised load shifting equipment
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the operation of specialised load shifting equipment
- Plan own work including predicting consequences and identifying improvements
- Monitor work activities in terms of planned schedule

Required skills:

- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Select and use relevant gear and accessories when operating specialised load shifting equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of specialised load shifting equipment and take appropriate action where required
- Service equipment in terms of maintenance schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace

EVIDENCE GUIDE

- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- Method of assessment**
- Assessment of this unit must be undertaken by a registered training organisation
 - As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
 - Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Work may be conducted:
- in a range of work environments
 - by day or night
- Customers may be:
- internal or external
- Workplaces may comprise:
- large, medium or small worksites
- Work may be conducted in:
- limited or restricted spaces
 - holds on ships
 - exposed conditions
 - controlled or open environments
 - even or uneven surfaces
 - wet or dry surfaces
- Equipment may include:
- reach stackers
 - straddle trucks
 - excavators
 - front-end loaders (over 10 tonne)

RANGE STATEMENT

- Requirements for work may include:
- bulldozers (both in transport and shipping terminals and in the holds of ships)
 - straddle carriers
 - site restrictions and procedures
 - use of safety and personal protective equipment
 - communications equipment
 - specialised lifting and/or handling equipment
 - additional gear and equipment
 - noise restrictions
 - hours of operations
 - authorities and permits
- Hazards in the work area may include exposure to:
- chemicals and fumes
 - dangerous or hazardous substances
 - stationary and moving machinery, goods, materials and vehicular traffic
 - contamination of, or from, materials being handled
 - service lines
 - spills, leakages and ruptures
 - dust/vapours
 - faulty gear/equipment/tools
- Consultative processes may involve:
- workplace personnel including supervisors and managers
 - equipment manufacturers and suppliers
 - site visitors and contractors
 - union representatives, industrial relations and OH&S specialists
 - other professional or technical staff
- Communication in the work area may include:
- phone
 - fax
 - email
 - internet
 - electronic data interchange (EDI)
 - RF communications
 - bar code readers
 - oral, aural or signed communications
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - respirators and fume masks
 - protective clothing

RANGE STATEMENT

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

Information/documents may include:

Applicable regulations and legislation may include:

- high visibility clothing
- company procedures
- enterprise procedures
- organisational procedures
- established procedures
- workplace procedures and policies for the operation of the specialised load shifting equipment concerned
- goods identification numbers and codes
- manifests, picking slips, merchandise transfers, stock requisitions and bar codes
- manufacturers specifications for equipment/tools
- equipment identification labels, bar codes and serial numbers
- supplier and/or client instructions
- relevant OH&S requirements and policies
- relevant Australian standards and certification requirements
- material safety data sheets where applicable
- codes of practice including the National Standards for Manual Handling and the Industry Safety Code
- relevant legislation, regulations and related documentation including the ADG Code
- award, enterprise bargaining agreement and other industrial arrangements
- quality assurance procedures
- emergency procedures
- relevant codes, regulations and licence/permit requirements pertaining to the operation of the specialised load shifting equipment concerned including the ADG Code (where applicable)
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation
- relevant Australian standards and certification requirements
- licence, patent or copyright arrangements
- water and road use and licence arrangements
- export/import/quarantine/bond requirements
- workplace relations regulations including equal opportunity, equal employment opportunity and affirmative action legislation
- workers compensation regulations

Unit Sector(s)

Not Applicable

Competency Field

Competency Field D - Load Handling

TLID2013A Move materials mechanically using automated equipment

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to move materials mechanically using automated equipment such as automatic guided vehicles, tow motors, high level order pickers, conveyor systems, and mechanised pallet movers. This includes selecting appropriate mechanical moving equipment (where relevant), moving materials/goods in accordance with operational requirements, checking condition of materials/goods and completing all required documentation. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the relevant OH&S regulations concerning the movement of materials mechanically using automated equipment.

Work is performed under limited or minimum supervision. It involves the application of the basic principles and routine procedures for the safe movement of materials mechanically using automated equipment.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Select load moving equipment

1.1 The mechanised handling equipment, the route to be taken and procedures to be used are selected appropriate to the characteristics of the goods

1.2 Dangerous goods and hazardous materials are identified and handled in accordance with codes of practice, OH&S requirements and workplace procedures

2 Move goods

2.1 Goods are moved using the selected materials handling equipment in accordance with occupational health and safety regulations, manufacturers instructions and company procedures

2.2 Problems in the movement of goods and materials using the automated equipment are identified and are reported in accordance with workplace procedures

3 Check goods and complete documentation

3.1 Moved goods are inspected for possible damage during transit/movement and appropriate action is taken

3.2 All required documentation is completed for the tracking of the moved goods in accordance with company requirements

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

REQUIRED KNOWLEDGE AND SKILLS

Required knowledge:

- Regulations relevant to the use of automated equipment to move materials mechanically
- Relevant OH&S and environmental protection procedures and guidelines
- Workplace procedures and policies for the use of automated equipment to move materials mechanically
- Focus of operation of work systems, equipment, management and site operating systems for the use of automated equipment to move materials mechanically
- The purpose, characteristics, capabilities, requirements and limitations of the automated materials moving equipment
- Problems that may occur during the use of automated equipment to move materials mechanically and appropriate action that can be taken to resolve the problems
- Risks when using automated equipment to move materials and related precautions to control the risks
- Documentation and record requirements
- Housekeeping standards procedures required in the workplace
- Site layout and obstacles

Required skills:

- Communicate effectively with others when using automated equipment to move materials mechanically
- Read and interpret instructions, procedures, information and signs relevant to the use of automated equipment to move materials mechanically
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the use of automated equipment to move materials mechanically
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when using automated equipment to move materials mechanically
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may arise when using automated equipment to move materials mechanically in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unplanned events
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- Monitor work activities in terms of planned schedule

Required skills:

- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of automated equipment and take appropriate action where required
- Ensure servicing of automated equipment in terms of maintenance schedule and standard operating procedures
- Check and replenish fluids (where applicable) and carry out lubrication processes in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment,

EVIDENCE GUIDE

- and
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- Method of assessment**
- Assessment of this unit must be undertaken by a registered training organisation
 - As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
 - Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- The operations may be conducted:
- in a range of work environments
 - by day or night
 - in a range of typical weather conditions
- Customers may be:
- internal or external
- Workplaces may comprise:
- large, medium or small worksites
- Work may be conducted in:
- restricted spaces
 - exposed conditions
 - controlled or open environments
- Mechanised equipment may include a range of goods and materials handling equipment such as:
- automatic guided vehicle
 - tow motors
 - high level order picker
 - conveyor system
 - mechanised pallet mover
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios

RANGE STATEMENT

- Hazards in the work area may include exposure to:
- high visibility clothing
 - chemicals
 - dangerous or hazardous substances
 - movements of equipment, goods and materials
 - moving and rotating equipment and vehicles
- Personnel in the work area may include:
- workplace personnel
 - site visitors
 - contractors
 - official representatives
- Communication in the work area may include:
- phone
 - electronic data interchange
 - fax
 - email
 - internet
 - radio
 - oral, aural or signed communications
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Information/documents may include:
- goods identification numbers and codes
 - manifests, bar codes, goods and container identification
 - manufacturers instructions concerning the use and servicing of automated mechanical equipment
 - workplace procedures and policies
 - supplier and/or client instructions
 - material safety data sheets
 - codes of practice including the National Standards for Manual Handling and the Industry Safety Code
 - relevant legislation, regulations and related documentation
 - award, enterprise bargaining agreement, other industrial arrangements
 - standards and certification requirements
 - quality assurance procedures
 - emergency procedures
- Applicable regulations and legislation may include:
- relevant state/territory OH&S legislation
 - relevant state/territory environmental protection legislation
 - workplace relations regulations
 - workers compensation regulations
 - ADG Code and regulations

Unit Sector(s)

Not Applicable

Competency Field

Competency Field D - Load Handling

TLID2047A Prepare cargo for transfer with slings

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to prepare cargo for transfer with slings in accordance with workplace requirements and relevant regulatory requirements, including preparing for transfer of cargo, calculating Safe Working Load (SWL) or Working Load Limit (WLL) of slings and loads, slinging cargo and unslinging cargo, and strapping and unstrapping goods. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in accordance with codes/regulations and workplace requirements relevant to the preparation of cargo for transfer with slings.

Safety checks and equipment tests are performed under limited supervision.

Work involves the application of regulatory requirements and workplace procedures to the preparation of cargo for transfer with slings in the stevedoring, transport, warehousing, distribution and/or storage industries.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1 Prepare for transfer of cargo | <ul style="list-style-type: none"> 1.1 Working area is prepared and maintained in accordance with national standards and safety codes and site operating procedures 1.2 Unsafe work practices and/or faulty equipment is reported in accordance with enterprise procedures 1.3 Correct protective equipment is identified and worn |
| 2 Calculate Safe Working Load or Working Load Limit of slings and loads | <ul style="list-style-type: none"> 2.1 Safe Working Load (SWL) or Working Load Limit (WLL) is calculated using standardised formulae for different types of lifting cables 2.2 Lifting equipment is checked to determine the safe working load 2.3 Slings gear is checked for conformity with safety equipment |
| 3 Sling cargo and unslung cargo | <ul style="list-style-type: none"> 3.1 Cargo is slung/unslung in accordance with national standards, safety codes and site operating procedures 3.2 Correct securing devices are identified and used 3.3 Load is steadied by tag lines as required 3.4 Damaged cargo is identified and reported in accordance with enterprise procedures 3.5 Slings attachments are released from load ensuring no injury to personnel or damage to machinery or cargo |
| 4 Strap and unstrap goods | <ul style="list-style-type: none"> 4.1 Cargo is strapped and unstrapped in accordance with national standards, safety codes and site operating procedures 4.2 Mechanical strapping equipment is used in accordance with manufacturers instructions 4.3 Damaged cargo is identified and reported in accordance with |

ELEMENT**PERFORMANCE CRITERIA**

- enterprise reporting procedures
- 4.4 Strapping arrangements are secured/released to/from load ensuring no injury to personnel or damage to machinery or cargo

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Regulations relevant to the transfer of cargo with slings, including, where relevant, the Australian Dangerous Goods Code and relevant bond, quarantine or other legislative requirements
- Relevant OH&S and environmental protection procedures and guidelines
- Workplace procedures and policies for the transfer of cargo with slings
- Focus of operation of work systems, equipment, management and site operating procedures for the transfer of cargo with slings
- Cargos potential for toxicity, reactivity, material grade, type and purpose including information from relevant material safety data sheets and Australian Dangerous Goods Code documentation (where applicable)
- Gear and equipment used during the transfer of cargo with slings and the precautions and procedures that should be followed in their use
- Problems that may occur when preparing cargo for transfer with slings and appropriate action that can be taken to resolve the problems
- Documentation and record requirements
- Housekeeping standards procedures required in the workplace
- Site layout and obstacles

Required skills:

- Communicate effectively with others when preparing cargo for transfer with slings
- Read and interpret instructions, procedures, information and signs relevant to the preparation of cargo for transfer with slings
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the preparation of cargo for transfer with slings
- Operate electronic communication equipment to required protocol

Required skills:

- Work collaboratively with others when preparing cargo for transfer with slings
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may occur when preparing cargo for transfer with slings in accordance with regulatory requirements and workplace procedures
- Plan own work including predicting consequences and identifying improvements
- Implement contingency plans for unanticipated situations that may arise when preparing cargo for transfer with slings
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the preparation of cargo for transfer with slings
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Select and use relevant gear and equipment when preparing cargo for transfer with slings
- Use balance points and estimate weights in setting up loads to be shifted
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts

EVIDENCE GUIDE

for assessment

- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Work may be conducted:

- in a range of work environments
- by day or night

Customers may be:

- internal or external

Workplaces may comprise:

- large, medium or small worksites

Work may be conducted in:

- limited or restricted spaces
- exposed conditions
- controlled or open environments
- even or uneven surfaces

RANGE STATEMENT

- Slings gear may include:
- wet or dry surfaces
 - fibre ropes
 - wire ropes
 - chains
 - webbing slings
- Hazards in the work area may include exposure to:
- chemicals and fumes
 - dangerous or hazardous substances
 - stationary and moving machinery, goods, materials and vehicular traffic
 - contamination of, or from, materials being handled
 - service lines
 - spills, leakages and ruptures
 - dust/vapours
 - faulty gear/equipment/tools
- Requirements for work may include:
- site restrictions and procedures
 - use of safety and personal protective equipment
 - communications equipment
 - specialised lifting and/or handling equipment
 - additional gear and equipment
 - noise restrictions
 - hours of operations
 - authorities and permits
- Consultative processes may involve:
- workplace personnel including supervisors and managers
 - equipment manufacturers and suppliers
 - site visitors and contractors
 - union representatives, industrial relations and OH&S specialists
 - other professional or technical staff
- Communication in the work area may include:
- phone
 - fax
 - email
 - internet
 - RF communications
 - bar code readers
 - oral, aural or signed communications
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - respirators and fume masks

RANGE STATEMENT

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- protective clothing
- high visibility clothing
- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Information/documents may include:

- workplace procedures and policies for the preparation of cargo for transfer with slings
- goods identification numbers and codes
- manifests, bar codes, goods and container identification/serial number
- manufacturers specifications
- equipment identification labels, bar codes and serial numbers
- supplier and/or client instructions
- relevant OH&S requirements and policies
- relevant Australian standards and certification requirements including Australian Standard on wire rope, chain and webbing slings
- material safety data sheets where applicable
- codes of practice including the National Standards for Manual Handling and the Industry Safety Code
- relevant legislation, regulations and related documentation including the ADG Code (where applicable)
- award, enterprise bargaining agreement and other industrial arrangements
- quality assurance procedures
- emergency procedures

Applicable regulations and legislation may include:

- relevant codes and regulations pertaining to the transfer of cargo with slings
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation
- relevant Australian standards and certification requirements, including Australian Standard 2359 - Industrial Truck Code
- licence, patent or copyright arrangements
- water and road use and licence arrangements
- export/import/quarantine/bond requirements
- workplace relations regulations including equal opportunity, equal employment opportunity and affirmative action legislation
- workers compensation regulations

Unit Sector(s)

Not Applicable

Competency Field

Competency Field D - Load Handling

TLID3011A Conduct specialised forklift operations

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to operate a forklift with specialised attachments or all-terrain equipment, including checking attachments and worksite for suitability, selecting the type of forklift and accessories for required load shifting tasks, and shifting load and completing work in accordance with operational requirements. Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory OH&S authority. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Specialised operation of a forklift must be carried out in compliance with the licence requirements and regulations of the relevant state/territory authority.

Specialised operation of a forklift is performed under some supervision, generally within a team environment. It involves the application of equipment operation principles and procedures to maintain the safety and specialised operation of a forklift in a wide variety of operational contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1 Check attachments and worksite for suitability | <ul style="list-style-type: none"> 1.1 Suitable work site is selected for operations 1.2 Work area is checked for overhead obstructions and proximity to service delivery lines 1.3 Barriers or warning signs are erected in areas subject to passing traffic 1.4 Attachments and platforms are securely fixed to carriage or tines 1.5 Personnel support platforms are inspected to ensure compliance with the relevant Australian Standard |
| 2 Select type of forklift and accessories for the required workplace task | <ul style="list-style-type: none"> 2.1 Special equipment, accessories or attachments are identified to match load characteristics and work requirements 2.2 Appropriate specialised equipment is selected 2.3 Existing attachments are removed and stored according to workplace procedures 2.4 Specialised equipment is fitted according to manufacturers instructions and workplace procedures 2.5 Designated staff are notified regarding specialist operations |
| 3 Shift load and complete work | <ul style="list-style-type: none"> 3.1 Equipment is operated within safe working limits and to maximise efficiency of operations 3.2 Load is lifted, carried and set down in accordance with workplace and manufacturers procedures and regulatory requirements 3.3 Documentation is completed reporting any damage or faults to goods or equipment 3.4 Specialist equipment and forklift are returned to appropriate |

ELEMENT	PERFORMANCE CRITERIA
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storage/parking area

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant duty of care requirements pertaining to the specialised operation of a forklift
- Relevant OH&S and environmental procedures and regulations
- Workplace operating procedures
- Forklift controls, instruments and indicators and their use
- Types of forklift accessories and ancillary equipment, their purposes and procedures for their use
- Handling procedures for forklifts involved in specialised operations
- Procedures to be followed in the event of an operational emergency
- Operating hazards and related defensive driving and hazard control techniques
- Engine power management and safe operating strategies
- Efficient driving techniques
- Pre-operational checks carried out on forklift and accessories and related action
- Site layout and obstacles
- Principles of stress management when driving a forklift

Required skills:

- Communicate effectively with others when conducting specialised forklift operations
- Read and interpret instructions, procedures, information and signs relevant to specialised forklift operations
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to specialised forklift operations
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when conducting specialised forklift operations
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may arise when conducting specialised forklift operations in accordance with regulatory requirements

Required skills:

and workplace procedures

- Implement contingency plans for unexpected events that may occur when conducting specialised forklift operations
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during specialised forklift operations
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Identify points of balance and safe lifting positions on a range of loads when operating a forklift (including accessories)
- Monitor performance of equipment
- Service equipment in terms of maintenance schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:

EVIDENCE GUIDE

- a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
- access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Types of forklift may include:

- counterbalance trucks
- reach trucks
- pallet trucks
- container-handling heavy forklifts
- vacuum
- top frame

Specialised forklift operations may be carried out in typical forklift operational situations, including:

- operations conducted at day or night
- typical weather conditions
- on the open road
- on a private road or worksite
- while at a workplace

RANGE STATEMENT

- Customers may be:
- internal or external
- Workplaces may comprise:
- large, medium or small worksites
- Specialised forklift may be used to assist in a range of workplace tasks, including:
- stock/goods/container handling
 - loading and unloading vehicles
 - stacking stock and goods
 - lifting and moving equipment
 - transporting materials and goods in a workplace
- Work may be conducted in:
- restricted spaces
 - exposed conditions
 - controlled or open environments
- Loads to be shifted may require:
- special precautions
- Specialised forklift operations may involve the use of a range of attachments and accessories, including:
- spikes
 - drum carriers
 - bale carriers
 - tines
 - personnel carriers
 - high reaching
 - pantograph
 - jibs
 - paper clamps
 - hooks
 - side lifters
- Loads to be shifted may be:
- irregularly shaped
 - packaged or unpackaged
 - labelled or unlabelled
 - palletted or unpalletted
 - containerised
- Personnel in the work area may include:
- workplace personnel
 - site visitors
 - contractors
 - official representatives
- Forklift operational procedures may include:
- starting a forklift (including pre-start checks)
 - steering and manoeuvring a forklift
 - accelerating and braking
 - positioning and stopping a forklift
 - reversing a forklift
 - operating forklift controls, instruments and indicators
 - using defensive driving techniques

RANGE STATEMENT

Pre-operational checks may include but are not limited to:

- managing engine performance
- visual checking of forklift and its associated accessories and equipment
- checking and topping up of fluid levels
- checks of tyres
- checks of operation of forklift lights and indicators
- checks of brakes

Post-operational checks may include but are not limited to:

- parking in a safe place
- shutting down forklift
- lowering all equipment
- visually checking for faults or damage

Hazards may include (examples only):

- wet and iced operating surfaces
- oil on operating surface
- faulty brakes
- workplace obstacles and other operational equipment and vehicles
- damaged loads and pallets
- other personnel in work area

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Personal protective equipment may include:

- gloves
- safety headwear and footwear
- safety glasses
- two-way radios
- high visibility clothing

Information/documents may include:

- goods identification numbers and codes, including IMDG markings and HAZCHEM signs
- manifests, bar codes, picking slips, merchandise transfers, stock requisitions, goods and container identification
- Australian Standard 2359 - Industrial Truck Code
- manufacturers specifications for forklift and associated accessories and equipment
- operations and service record book or log
- workplace procedures and policies for the operation of forklifts
- supplier and/or client instructions
- material safety data sheets
- regulatory requirements concerning the use of forklifts

RANGE STATEMENT

Applicable procedures and codes may include:

- award, enterprise bargaining agreement, other industrial arrangements
- standards and certification requirements
- quality assurance procedures
- emergency procedures
- relevant state/territory regulations pertaining to the operation of forklifts
- relevant codes and standards, including Australian Standard 2359 - Industrial Truck Code
- relevant state/territory OH&S legislation
- relevant state/territory fatigue management regulations
- relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field D - Load Handling

TLID3014A Load and unload vehicles carrying special loads

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to load and unload vehicles carrying special loads. It includes loading and unloading the special load onto and from the vehicle, securing and protecting the vehicle and the load, and completing all required documentation. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the licence and permit requirements and regulations of the relevant state/territory roads and traffic authority as well as the specific code, regulatory and permit requirements pertaining to the special load being carried.

Work is performed under some supervision generally within a team environment. It involves the application of the basic principles, routine procedures and regulatory requirements to the loading and unloading of vehicles designed to carry special loads.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Load and unload vehicle

- 1.1 Load characteristics are identified and taken into account when determining appropriate loading and unloading procedures
- 1.2 Hazardous cargo is identified and handled in accordance with required procedures for hazardous and dangerous cargo
- 1.3 Vehicle is loaded demonstrating compliance with vehicle loading regulations and workplace safety requirements
- 1.4 Lifting aids and appliances are selected and used to aid loading procedures in compliance with workplace procedures and safety legislation
- 1.5 Vehicle is unloaded or partially unloaded in a safe and efficient manner taking into account suitable locations, stowage, safe use of equipment and the balance of the remaining load
- 1.6 Ancillary equipment is operated in accordance with company procedures and manufacturers instructions during loading and unloading operations

2 Secure and protect vehicle and load

- 2.1 The vehicle load is secured using the correct load restraint and protection equipment for different loads, vehicles and carriage conditions
- 2.2 The load is protected in accordance with legal and workplace safety requirements
- 2.3 The distribution of the load is checked to ensure that it is even, legal and within the safe working capacity of the vehicle

3 Complete documentation

- 3.1 The loaded vehicle is inspected and checked for security to travel
- 3.2 All required transportation documentation for the cargo is completed in accordance with workplace requirements

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant state/territory mass and loading regulations and regulations pertaining to the various types of special loads, including Australian Dangerous Goods (ADG) and Australian Explosives Code, where applicable
- OH&S procedures and guidelines concerning the lifting and movement of loads
- Characteristics of various types of special loads
- Risks and hazards when loading and unloading various types of special loads, and related precautions to control the risk
- Workplace procedures and policies for the loading and unloading of vehicles designed to carry special loads
- Containers and goods coding, IMDG markings and, where applicable, emergency information panels, including their meaning and implications for loading and unloading processes
- Housekeeping standards procedures required in the workplace
- Methods of securing various types of special loads
- Site layout and obstacles

Required skills:

- Communicate effectively with others when loading and unloading special loads from vehicles
- Read and interpret instructions, procedures, information and signs relevant to the loading and unloading of special loads from vehicles
- Identify and interpret containers and goods coding, IMDG markings and, where applicable, emergency information panels
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the loading and unloading of special loads from vehicles
- Operate electronic communication equipment to required protocol
- Estimate the size, shape and special requirements of loads
- Work collaboratively with others when loading and unloading special loads from vehicles
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may occur when loading and unloading special loads from vehicles in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when loading and unloading special loads from vehicles

Required skills:

- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the loading and unloading of special loads from vehicles
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Identify and correctly use equipment required to load and unload the various types of special loads
- Safely use manual handling techniques to operate manually

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of:
 - applying the underpinning knowledge and skills
 - demonstrating the safe loading and unloading of a load
 - applying techniques for the security of loads
 - applying relevant legislation and workplace procedures

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment,

EVIDENCE GUIDE

and/or

- access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- As a minimum, assessment of knowledge must be conducted through appropriate assessments using written/practical/oral assessments
- Practical assessment must occur:
 - through activities in an appropriately simulated environment, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Type of vehicle may include all vehicles designed to carry special loads, for example:

- concrete agitator
- livestock transporter
- armoured car
- tanker
- refrigerated vehicle
- waste vehicle
- fresh produce vehicle
- car carrier
- container carrier
- recovery vehicle
- vehicle carrying dangerous goods or explosives
- vehicle carry over dimensional load

Loading and unloading operations may be conducted:

- in a range of work environments and weather conditions
- by day or night

RANGE STATEMENT

- Customers may be:
- internal or external
- Workplaces may comprise:
- large, medium or small worksites
- Work may be conducted in:
- restricted spaces
 - exposed conditions
 - controlled or open environments
- Loads to be shifted may be:
- irregularly shaped
 - packaged or unpackaged
 - labelled or unlabelled
 - palleted or unpalleted
 - liquid loads
 - motor vehicles
 - motor bikes
- Hazards in the work area may include exposure to:
- chemicals
 - dangerous or hazardous substances
 - movements of equipment, goods and materials
- Personnel in the work area may include:
- workplace personnel
 - site visitors
 - contractors
 - official representatives
- Communication in the work area may include:
- phone
 - electronic data interchange (EDI)
 - fax
 - email
 - internet
 - radio
 - oral, aural or signed communications
- Loading operations may be carried out:
- manually
 - with the aid of lifting equipment and/or appliances
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - high visibility clothing

RANGE STATEMENT

Information/documents may include:

- goods identification numbers and codes, including ADG and IMDG markings and HAZCHEM signs
- manifests, bar codes, goods and container identification
- manufacturers specifications for equipment/tools
- workplace procedures and policies
- Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
- supplier and/or client instructions
- material safety data sheets
- codes of practice including the National Standards for Manual Handling and the Industry Safety Code
- National Load Restraint Guide
- Australian Truck Drivers Manual
- award, enterprise bargaining agreement, other industrial arrangements
- relevant standards and certification requirements
- quality assurance procedures
- emergency procedures

Applicable regulations and legislation may include:

- state/territory mass and loading regulations
- Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - Australian and International Dangerous Goods Codes
 - Australian Marine Orders and the International Maritime Dangerous Goods Code
 - IATA Dangerous Goods by Air regulations
 - Australian and International Explosives Codes
 - Code of Practice for the Safe Transport of Radioactive Substances
 - state/territory legislation covering the safe handling of infectious substances
- relevant state/territory environmental protection legislation
- relevant state/territory OH&S legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

D - Load Handling

TLID3033A Operate a vehicle-mounted loading crane

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to operate a vehicle-mounted loading crane to shift loads, including positioning and stabilising the crane, operating the vehicle-mounted crane, monitoring lift conditions, packing up the crane after operations, and completing all required job records. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the licence/permit requirements and regulations of the relevant state/territory authorities pertaining to vehicle-mounted loading cranes.

Work is performed under general supervision. It involves the application of routine principles and procedures to the operation of a vehicle-mounted loading crane in a variety of operational contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Position and stabilise crane

- 1.1 Crane is driven to position as per job plan to ensure safe operation in accordance with applicable Australian standards, codes of practice, manufacturers specifications and, where applicable, regulatory and local government requirements
- 1.2 Where appropriate, barriers, fencing, temporary boundaries, signage and the like are used to isolate working area in accordance with safe working practice and lift requirements
- 1.3 Ground is checked to ensure it is firm enough to bear the load
- 1.4 Appropriate plates or packing are correctly used to adequately distribute the load
- 1.5 Any outriggers and stabilisers are correctly deployed and positioned in accordance with manufacturers instructions and the appropriate Australian standard and other relevant statutory regulations or local authority requirements
- 1.6 Outrigger packing is checked for adequacy prior to and after load is taken

2 Operate vehicle-mounted crane

- 2.1 Planned hazard control strategies are implemented
- 2.2 Required signals are correctly given, interpreted and followed in accordance with appropriate Australian standards
- 2.3 Load mass is assessed and correlated with lifting capacity of crane throughout proposed radii of operation
- 2.4 Appropriate lifting gear is selected and load secured
- 2.5 Load is hoisted and lowered into position using crane movements in accordance with the appropriate Australian standard
- 2.6 Crane controls are operated smoothly
- 2.7 Crane is shut down and secured during periods of non-operation according to manufacturers specifications and workplace procedures

ELEMENT	PERFORMANCE CRITERIA
3 Monitor lift conditions	<p>3.1 Load is constantly monitored to ensure load and structural stability</p> <p>3.2 Conditions which may affect the continuing stability of the crane are identified and monitored</p> <p>3.3 Unplanned situations are responded to in line with workplace procedures in a manner that minimises risk to personnel and equipment</p> <p>3.4 Advice is sought from supervisor where there is doubt about correct response to unanticipated conditions, or conflict with customer request</p> <p>3.5 Supervisor/allocator is advised of any concern about completing the job within timeframe</p> <p>3.6 Shut-down procedures are implemented in accordance with manufacturers instructions in the event of an emergency</p> <p>3.7 The relevant motion locks and brakes are applied</p> <p>3.8 Crane is shut down using the correct sequence of procedures in accordance with manufacturers specifications and workplace procedures</p> <p>3.9 Routine post-operational equipment checks are carried out in accordance with manufacturers specifications</p>
4 Pack up crane	<p>4.1 All lifting equipment and crane components are checked for any signs of deterioration or damage in accordance with the appropriate Australian standard</p> <p>4.2 Damaged or worn equipment is segregated and reported to an authorised person for testing/repair/destruction</p> <p>4.3 Crane equipment is correctly stowed and secured in accordance with manufacturers instructions and the appropriate Australian standard</p> <p>4.4 Crane is immobilised and secured for travel in accordance with manufacturers instructions, workplace guidelines and regulatory requirements</p>
5 Complete job records	<p>5.1 Customer feedback is sought regarding satisfaction with the completed job and any areas of concern reported according to workplace procedures</p> <p>5.2 Customer's signature on job completion documentation is obtained</p> <p>5.3 Required workplace records are updated accurately and promptly and processed according to workplace procedures</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements pertaining to mobile crane operation
- Relevant OH&S and environmental procedures and regulations
- Mobile crane applications, capacities, configurations, safety hazards and control mechanisms
- Operational procedures for crane crews
- Prioritising and multi-tasking work
- Company work procedures concerning the setting up and rigging of a mobile crane at a work site
- Problems that may arise when operating a vehicle-mounted loading crane and actions that should be taken to prevent or solve them
- Focus of operation of work systems and equipment
- Application of relevant agreements, codes of practice or other legislative requirements

Required skills:

- Communicate effectively with others when operating a vehicle-mounted loading crane
- Read and interpret instructions, procedures, information and signs relevant to the operation of a vehicle-mounted loading crane
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the operation of a vehicle-mounted loading crane
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when operating a vehicle-mounted loading crane
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when operating a vehicle-mounted loading crane in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unanticipated situations that may arise when operating a vehicle-mounted loading crane
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the operation of a vehicle-mounted loading crane
- Plan own work including predicting consequences and identifying improvements
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and

Required skills:

environments

- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of crane and its equipment and take appropriate action where required
- Service equipment in terms of maintenance schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and

EVIDENCE GUIDE

- Method of assessment**
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
 - Assessment of this unit must be undertaken by a registered training organisation
 - As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
 - Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Operations may be conducted:
- day or night
 - in a variety of weather conditions
- Environment may include movement of:
- equipment
 - goods
 - materials
 - vehicular traffic
- Customers may be:
- internal or external
- Mobile crane may be involved in work in a range of industry sectors including:
- construction and demolition
 - manufacturing
 - waterfront
 - mining
 - primary industry
 - utilities (electricity, gas, water)
 - arboricultural
 - swimming pool
 - quarrying
- Hazards may include:
- power lines
 - noise, light, energy sources

RANGE STATEMENT

- overhead service lines
 - surrounding buildings, structures, facilities
 - underground services
 - obstructions
 - uneven or unstable ground and recently filled trenches
 - stationary and moving machinery and equipment
 - hazardous or dangerous materials
 - traffic hazards and congestion
- Hazard management is:
- consistent with the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment
- Consultative processes may involve:
- other employees and supervisors
 - management
 - union representatives
 - clients
 - industrial relations and OH&S specialists
 - other professional or technical staff
- Requirements for access and/or lift may include:
- site restrictions and procedures
 - authorities and permits
 - hours of operation
 - induction
 - slings, chains, nets, brackets and other specialised lifting equipment
 - noise restrictions
 - personal protective equipment
 - support trucks
 - additional gear and equipment
 - communications equipment
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - sunscreen, sunglasses and safety glasses
 - two-way radios
 - high visibility clothing
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
 - site procedures
- Documentation/records may
- operations manuals for vehicle-mounted loading cranes

RANGE STATEMENT

include:

- Safe Working Load (SWL) and Working Load Limit (WLL)
- material safety data sheets
- induction documentation
- competency standards and training materials
- job specifications and procedures
- manufacturers specifications for vehicle-mounted loading cranes
- workplace operating procedures and policies
- supplier and/or client instructions
- communications technology equipment, oral, aural or signed communications
- personal and work area work procedures and practices
- conditions of service, legislation and industrial agreements including:
 - workplace agreements and awards
 - occupational health and safety procedures
 - standards and certification requirements
 - quality assurance procedures
 - emergency procedures

Applicable procedures and codes may include:

- relevant state/territory regulations and licence/permit requirements pertaining to vehicle-mounted loading cranes
- relevant state/territory road rules
- relevant state/territory OH&S legislation
- relevant state/territory fatigue management regulations
- relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

D - Load Handling

TLID3035A Operate a boom type elevating work platform

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to operate a boom type elevating work platform, including inspecting and testing the elevating work platform, assessing job requirements and work, planning work and setting up for lift, carrying out the elevation, implementing planned hazard control and strategies, and packing up the work platform after operations. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the licence/permit requirements and regulations of the relevant state/territory authorities pertaining to boom type elevating work platform operations.

Work is performed with limited or minimum supervision, and with limited accountability and responsibility for self and others in achieving the prescribed outcomes. It involves the application of routine principles and procedures to the operation of a boom type elevating work platform in a variety of operational contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Inspect and test elevating work platform

- 1.1 Work platform is visually inspected prior to operation for any evidence of damage, structural weakness or interference according to pre-operational safety check procedures
- 1.2 Routine pre-operational equipment checks are carried out in accordance with available checklists
- 1.3 Work platform log book is checked, service requirements are noted and maintenance personnel advised of any requirements
- 1.4 Elevating work platform is started in accordance with manufacturers guidelines and start-up procedures for operations and any abnormal noise or movement reported to an authorised person for corrective action
- 1.5 Start-up checks are conducted according to manufacturers specifications and company procedures to ensure work platform and equipment are operating correctly
- 1.6 Faults are corrected or are reported to an authorised person for corrective action according to company procedures
- 1.7 The operating and emergency controls are checked for correct operation in accordance with manufacturers specifications including use of the emergency decent device
- 1.8 Boom is lowered under simulated emergency conditions to check for operational effectiveness
- 1.9 Gear and accessories are checked and damaged or worn gear is segregated and reported to an authorised person for testing/repair/destruction
- 1.10 Results of inspections are recorded and reported according to company procedures

ELEMENT	PERFORMANCE CRITERIA
2 Assess job requirements and work	<p>2.1 Briefing, hand-over details, authorisations and clearances are received, interpreted and clarified in accordance with company and site procedures and legislative requirements</p> <p>2.2 Work area is inspected and potential hazards are identified and appropriate elimination or control measures selected</p> <p>2.3 Weight of load including personnel and equipment is correctly estimated to ensure job is within limits of work platform capacity</p>
3 Plan work and set up for lift	<p>3.1 A work plan is developed and agreed with relevant workplace personnel to include hazard prevention/control measures and safety and emergency procedures in line with applicable Australian standards</p> <p>3.2 A suitable firm and level standing is chosen and prepared for the location of the elevating work platform</p> <p>3.3 Outriggers and stabilisers are correctly deployed and positioned in accordance with manufacturers instructions and appropriate Australian standards</p> <p>3.4 Appropriate plates or packing are correctly used under the footplates as required to adequately distribute the loading</p> <p>3.5 Ground is checked before and after packing is installed to ensure it is firm enough to bear the load</p> <p>3.6 The job plan is developed to include hazard prevention/control measures and safety procedures in line with applicable Australian standards and to equipment manufacturers specifications</p> <p>3.7 Work platform load chart is located and information on permissible loads, radii and heights taken into account in planning the job</p> <p>3.8 The job plan takes into account job requirements and workplace rules and procedures</p> <p>3.9 Job plan is discussed and confirmed with relevant personnel</p> <p>3.10 Work gear and tools are properly stowed in the elevating work platform in accordance with Australian standards, company procedures and guides</p>
4 Carry out elevation	<p>4.1 Configuration and operation of elevating work platform are checked as necessary to ensure safe lift</p> <p>4.2 Operation of work platform is carried out in accordance with the job plan, the appropriate Australian standard and manufacturers specifications</p>
5 Planned hazard control and strategies are implemented	<p>5.1 Load is constantly monitored to ensure safety of personnel, load and structural stability</p> <p>5.2 Unplanned situations are responded to in line with company</p>

ELEMENT	PERFORMANCE CRITERIA
	procedures in a manner that minimises risk to personnel and equipment
	5.3 Required signals are correctly given, interpreted and followed in accordance with appropriate Australian standards
6 Pack up work platform	6.1 The elevating work platform is shut down using the correct sequence of procedures in accordance with manufacturers instructions
	6.2 Routine post-operational equipment checks are carried out in accordance with manufacturers instructions and available checklists and defects recorded and reported in line with company procedures
	6.3 The elevating work platform is dismantled in accordance with the job plan, manufacturers instructions and relevant statutory regulations
	6.4 The outriggers and stabilisers are secured and stowed in accordance with manufacturers instructions
	6.5 The elevating work platform is correctly stowed and secured in accordance with manufacturers instructions and company procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements pertaining to boom type elevating work platform operation
- Relevant OH&S and environmental procedures and regulations
- Boom type elevating work platform applications, capacities, configurations, safety hazards and control mechanisms
- Workplace procedures concerning the operation of a boom type elevating work platform at a worksite
- Problems that may arise when operating a boom type elevating work platform and actions that should be taken to prevent or solve them
- Risks and hazards involved in the operation of a boom type elevating work platform and the associated action that can be taken to eliminate or minimise the risk/hazards concerned
- Focus of operation of work systems and equipment

Required skills:

- Communicate effectively with others when operating a boom type elevating work platform
- Read and interpret instructions, procedures, regulations, codes of practice and manuals relevant to the operation of a boom type elevating work platform
- Interpret and follow operational instructions
- Complete documentation related to the operation of a boom type elevating work platform
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when operating a boom type elevating work platform
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when operating a boom type elevating work platform in accordance with regulatory requirements and workplace procedures
- Plan own work including predicting consequences and identifying improvements
- Prioritise and multi-task work
- Implement contingency plans for unanticipated situations that may arise when operating a boom type elevating work platform
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the operation of a boom type elevating work platform
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Identify and correctly use equipment, processes and procedures
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of equipment
- Service equipment in terms of maintenance schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Operations may be conducted:
- by day or night
 - in a variety of weather conditions
- Environment may include movement of:
- equipment
 - goods
 - materials
 - vehicular traffic
- Customers may be:
- internal or external
- Boom type elevating work platform may be involved in work in a range of industry sectors including:
- construction and demolition
 - manufacturing
 - waterfront
 - mining
 - primary industry
 - utilities (electricity, gas, water)
 - arboricultural
 - swimming pool
 - quarrying
- Hazards may include:
- power lines
 - noise, light, energy sources
 - overhead service lines
 - surrounding buildings, structures, facilities
 - underground services
 - obstructions
 - uneven or unstable ground and recently filled trenches
 - stationary and moving machinery and equipment
 - hazardous or dangerous materials
 - traffic hazards and congestion
- Hazard management is consistent with:
- the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment
- Consultative processes may involve:
- other employees and supervisors
 - management
 - union representatives
 - clients
 - industrial relations and OH&S specialists
 - other professional or technical staff

RANGE STATEMENT

Requirements for access and/or lift may include:

- site restrictions and procedures
- authorities and permits
- hours of operation
- induction
- slings, chains, nets, brackets and other specialised lifting equipment
- noise restrictions
- personal protective equipment
- support trucks
- additional gear and equipment
- communications equipment

Personal protective equipment may include:

- gloves
- safety headwear and footwear
- sunscreen, sunglasses and safety glasses
- two-way radios
- high visibility clothing

Elevating platforms may include:

- mechanically operated equipment
- hydraulically operated equipment
- electrically operated equipment

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures
- site procedures

Documentation/records may include:

- operations manuals
- Safe Working Load (SWL) and Working Load Limit (WLL)
- site plans
- induction documentation
- competency standards and training materials
- job specifications and procedures
- manufacturers specifications
- workplace operating procedures and policies
- supplier and/or client instructions
- communications technology equipment, oral, aural or signed communications
- personal and work area work procedures and practices
- conditions of service, legislation and industrial agreements including:
 - workplace agreements and awards

RANGE STATEMENT

- occupational health and safety procedures
 - standards and certification requirements
 - quality assurance procedures
 - emergency procedures
- Applicable procedures and codes may include:
- relevant state/territory regulations and licence/permit requirements pertaining to the operation of boom type elevating work platforms
 - relevant state/territory road rules
 - relevant state/territory OH&S legislation
 - relevant state/territory fatigue management regulations
 - relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field D - Load Handling

TLID3036A Lift and move load using a mobile crane

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to lift and move a load using a non-slewing mobile crane or a slewing mobile crane. It includes operating the mobile crane to complete job requirements, monitoring lift conditions, implementing shut-down procedures, packing up crane after operations, and completing all required job records. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the licence/permit requirements and regulations of the relevant state/territory authorities pertaining to operations of mobile cranes.

Work is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes. It involves the application of routine principles, procedures and regulations to lift and move loads using slewing and non-slewing mobile cranes in a variety of operational contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Operate mobile crane

- 1.1 In ascent and descent to/from crane correct use is made of the means provided in accordance with codes of practice and workplace procedures
- 1.2 Planned hazard control strategies are implemented
- 1.3 Required signals are correctly given, interpreted and followed in accordance with appropriate workplace procedures
- 1.4 Boom is positioned to ensure load to be lifted is plumbed under hook
- 1.5 Load is hoisted and lowered into position using crane movements in accordance with the appropriate workplace procedures
- 1.6 Crane controls are operated smoothly
- 1.7 Crane is shut down and secured during periods of non-operation according to manufacturers specifications and workplace procedures

2 Monitor lift conditions

- 2.1 Load is constantly monitored to ensure load and structural stability
- 2.2 Conditions which may affect the continuing stability of the crane are identified and monitored
- 2.3 Unplanned situations are responded to in line with workplace procedures in a manner that minimises risk to personnel and equipment
- 2.4 Dogger is advised of any new information which affects the lift
- 2.5 Any necessary changes to job plan are discussed and confirmed with rest of crew
- 2.6 Advice is sought from supervisor where there is doubt about

ELEMENT	PERFORMANCE CRITERIA
	correct response to unanticipated conditions, or conflict with customer request
	2.7 Supervisor/allocator is advised of any concern about completing the job within timeframe
3 Implement shut-down procedures	3.1 The relevant motion locks and brakes are applied
	3.2 Crane is shut down using the correct sequence of procedures in accordance with manufacturers specifications and workplace procedures
	3.3 Routine post-operational equipment checks are carried out in accordance with manufacturers specifications
4 Pack up crane	4.1 Crane is de-rigged with other crane personnel in accordance with manufacturers instructions
	4.2 All lifting equipment and crane components are checked in consultation with crane personnel for any signs of deterioration or damage in accordance with the appropriate Australian Standard
	4.3 Damaged or worn equipment is segregated and reported to an authorised person for testing/repair/destruction
	4.4 Crane and equipment are correctly stowed and secured in accordance with manufacturers instructions and the appropriate Australian Standard
5 Complete job records	5.1 Customer feedback is sought regarding satisfaction with the completed job, and any areas of concern are reported according to workplace procedures
	5.2 Customer's signature on job completion documentation is obtained
	5.3 Required workplace records are updated accurately and promptly and processed according to workplace procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements pertaining to mobile crane operation
- Relevant OH&S and environmental procedures and regulations

REQUIRED KNOWLEDGE AND SKILLS

- Mobile crane applications, capacities, configurations, safety hazards and control mechanisms
- Risks and hazards involved in mobile crane operation, and associated action that can be taken to eliminate or minimise the risk
- Workplace procedures concerning the operation of a mobile crane at a worksite
- Problems that may occur during a lift, and associated action that can be taken to address the problems concerned
- Communication systems used during a lift
- Focus of operation of work systems and equipment

Required skills:

- Communicate effectively with others when lifting and moving a load using a mobile crane
- Read and interpret instructions, procedures, information and signs relevant to the lifting and moving of a load using a mobile crane
- Complete documentation related to the lifting and moving of a load using a mobile crane
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when lifting and moving a load using a mobile crane
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when lifting and moving a load using a mobile crane in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unanticipated situations that may arise when lifting and moving a load using a mobile crane
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the lifting and moving of a load using a mobile crane
- Plan own work including predicting consequences and identifying improvements
- Prioritise and multi-task work
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of equipment

Required skills:

- Service equipment in terms of maintenance schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of:
 - applying the underpinning knowledge and skills
 - applying relevant legislation and workplace procedures
 - complying with OH&S licensing legislation
 - applying risk assessment and management procedures for mobile crane operations
 - effectively completing the pre-operational checks, positioning, stabilising, set-up, post-operational checks of a mobile crane
 - using mathematical procedures to determine the weight of a load and the lifting equipment required for the lift
 - using load charts to determine the limitations of the crane and/or crane set-up required
 - operating the crane including all functions to their maximum extension in the lifting and moving of a load

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace

EVIDENCE GUIDE

- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- Method of assessment**
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
 - Practical assessment must occur:
 - through appropriately simulated activities at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Operations may be conducted:
- by day or night
 - in a variety of weather conditions
- Environment may include movement of:
- equipment
 - goods
 - materials and vehicular traffic
- Customers may be:
- internal or external
- Mobile crane may be any slewing and non-slewing crane and may be involved in work in a range of industry sectors including:
- construction and demolition
 - manufacturing
 - waterfront
 - mining
 - primary industry
 - utilities (electricity, gas, water)
 - arboricultural
 - swimming pool
 - quarrying
- Hazards may include:
- power lines
 - noise, light, energy sources

RANGE STATEMENT

- overhead service lines
 - surrounding buildings, structures, facilities
 - underground services
 - obstructions
 - uneven or unstable ground and recently filled trenches
 - stationary and moving machinery and equipment
 - hazardous or dangerous materials
 - traffic hazards and congestion
- Hazard management is consistent with:
- the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - sunscreen, sunglasses and safety glasses
 - two-way radios
 - high visibility clothing
- Consultative processes may involve:
- other employees and supervisors
 - management
 - union representatives
 - clients
 - industrial relations and OH&S specialists
 - other professional or technical staff
- Requirements for access and/or lift may include:
- site restrictions and procedures
 - authorities and permits
 - hours of operation
 - induction
 - slings, chains, nets, brackets and other specialised lifting equipment
 - noise restrictions
 - personal protective equipment
 - support trucks
 - additional gear and equipment
 - communications equipment
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
 - site procedures
- Documentation/records may
- site plans

RANGE STATEMENT

include:

- Safe Working Load (SWL) and Working Load Limit (WLL)
- operations manuals including load charts and crane and rigging manuals
- induction documentation
- competency standards and training materials
- job specifications and procedures
- manufacturers specifications
- workplace operating procedures and policies
- supplier and/or client instructions
- communications technology equipment, oral, aural or signed communications
- personal and work area work procedures and practices
- conditions of service, legislation and industrial agreements including:
 - workplace agreements and awards
 - occupational health and safety procedures
 - standards and certification requirements
 - quality assurance procedures
 - emergency procedures

Applicable procedures and codes may include:

- relevant state/territory regulations and licence/permit requirements pertaining to mobile cranes
- relevant Australian Standards and certification requirements
- relevant state/territory road rules
- relevant state/territory OH&S legislation
- relevant state/territory fatigue management regulations
- relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

D - Load Handling

TLID3043A Shift loads using gantry equipment

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to shift loads using gantry equipment in accordance with workplace and regulatory requirements, including planning the work for the prevailing working conditions; using the controls and operating systems to manage the operation of the equipment; locating the load and identifying the load characteristics; safely moving the load; monitoring the controls; and stopping, shutting down and securing the equipment after the completion of operations. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the relevant regulations and workplace requirements concerning the shifting of loads using gantry equipment.

Work is performed under some supervision generally within a team environment. It involves the application of workplace procedures and regulatory requirements when shifting loads using gantry equipment as part of work activities in the stevedoring, transport, distribution and allied industries.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Plan work for the prevailing working conditions

- 1.1 Traffic flow, weather and work area conditions are constantly assessed and anticipated to allow safe operation to ensure no injury to people, or damage to equipment, loads or facilities
- 1.2 Characteristics of the load are taken into account to ensure that, where applicable, appropriate attachments/gear are used to move the load
- 1.3 Any occurrences in the work area that may affect the safety and efficiency of operations are reported to the appropriate personnel

2 Use controls and operating systems to manage the operation of the equipment

- 2.1 Equipment is prepared and appropriate attachments fitted (where applicable)
- 2.2 Gear and operational levers are checked to ensure that they are in the neutral position prior to inserting ignition key and starting engine
- 2.3 Engine is started in accordance with manufacturers guidelines to bring the engine to speed
- 2.4 Instruments and gauges are monitored during start-up and operations to ensure that operation is within manufacturers specifications and workplace and regulatory safety requirements
- 2.5 Engine power is managed for efficiency of equipment movement and economy of equipment operations
- 2.6 Equipment operations are conducted within manufacturers specified torque range
- 2.7 Any faults or damage to equipment are immediately reported to the appropriate personnel

3 Locate load and identify

- 3.1 Load is located and identified according to instructions

ELEMENT	PERFORMANCE CRITERIA
load characteristics	<p>3.2 Requirements for Safe Working Load (SWL) and Working Load Limit (WLL) of the gantry equipment are identified</p> <p>3.3 Load weight and dimensions are checked to ensure they fall within the capacity of the equipment</p> <p>3.4 Loading and unloading plans are followed to ensure efficiency and safety of operations</p> <p>3.5 Characteristics of the load are taken into account to ensure that appropriate loading and unloading procedures are followed</p> <p>3.6 Hazardous cargo is identified and relevant procedures are taken into account when planning and conducting the work</p>
4 Safely move load	<p>4.1 Equipment is operated and positioned using smooth and controlled movements</p> <p>4.2 Manoeuvres are within the limits of the equipment and in line with manufacturers specifications</p> <p>4.3 Load is moved ensuring no injury to personnel or damage to equipment or cargo</p> <p>4.4 Continuous communication is maintained with personnel assisting the operator in the load movement operations using appropriate communications technology and procedures</p> <p>4.5 In the event of a safety incident or emergency, the equipment is immediately stopped and workplace emergency procedures followed</p> <p>4.6 Safety incidents and emergencies are reported in accordance with workplace procedures and regulatory requirements</p>
5 Monitor and operate controls	<p>5.1 Equipment controls are monitored and operated in accordance with manufacturers operating instructions</p> <p>5.2 Control systems are understood and acted upon in accordance with regulatory requirements, manufacturers guidelines and workplace operating procedures</p> <p>5.3 Control faults are identified and reported in accordance with enterprise guidelines</p> <p>5.4 Hazards in the work area are identified and appropriate measures are adopted to control the risks in accordance with regulatory requirements and workplace procedures</p>
6 Stop, shut down and secure equipment	<p>6.1 Equipment is brought to a controlled halt and shut down without injury to personnel or damage to equipment, loads or facilities in accordance with manufacturers guidelines and workplace procedures</p> <p>6.2 Equipment is secured in accordance with manufacturers instructions and workplace procedures</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Australian and international codes, regulations, licence/permit requirements relevant to the use of gantry equipment to shift loads
- Relevant OH&S and environmental protection procedures and guidelines
- Workplace procedures and policies for the use of gantry equipment to shift loads
- Focus of operation of work systems, equipment, management and site operating systems for the use of gantry equipment to shift loads
- Problems that may occur when using gantry equipment to shift loads and appropriate action that can be taken to resolve the problems
- Relevant safety codes and emergency procedures
- Types of gantry equipment used to shift loads in terminals/wharves, their applications and procedures and precautions for their use
- Requirements for Safe Working Load (SWL) and Working Load Limit (WLL) of gantry equipment
- The marking and numbering systems for cargo
- Relevant bond, quarantine or other legislative requirements

Required skills:

- Communicate effectively with others when shifting loads using gantry equipment
- Read and interpret instructions, procedures, information and labels relevant to the shifting of loads using gantry equipment
- Identify cargo, container and goods, coding, ADG and IMDG markings and where applicable emergency information panels
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the shifting of loads using gantry equipment
- Receive, acknowledge and send messages with appropriate communications equipment
- Estimate the size, shape and special requirements of loads
- Work collaboratively with others when shifting loads using gantry equipment
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when shifting loads using gantry equipment in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unanticipated situations that may arise when shifting loads

Required skills:

using gantry equipment

- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the shifting of loads using gantry equipment
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Identify, select and use relevant equipment, processes and procedures when using gantry equipment to shift loads
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Apply effective eye-hand coordination to operational tasks
- Monitor performance of equipment
- Service equipment in terms of maintenance schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities
- Select and use required personal protective equipment conforming to industry and OH&S standards

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or

EVIDENCE GUIDE

- other simulated practical and knowledge assessment, and/or
- access to an appropriate range of relevant operational situations in the workplace
 - In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- Method of assessment**
- Assessment of this unit must be undertaken by a registered training organisation
 - As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
 - Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Work may be conducted:
- in a range of work environments
 - by day or night
- Customers may be:
- internal or external
- Workplaces may comprise:
- large, medium or small worksites
- Work may be conducted in:
- limited or restricted spaces
 - exposed conditions
 - controlled or open environments
 - even or uneven surfaces
 - wet or dry surfaces
- Cargo/freight may include:
- goods/containers with specialist requirements, including

RANGE STATEMENT

- Range of equipment may include:
- temperature controlled goods and dangerous goods
 - various types of bridge and gantry cranes
- Hazards in the work area may include exposure to:
- chemicals
 - dangerous or hazardous substances
 - movements of equipment, goods, materials and vehicular traffic
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - protective clothing
 - high visibility clothing
- Communication in the work area may include:
- phone
 - fax
 - email
 - electronic data transfer (EDI)
 - RF systems
 - radio
 - oral, aural or signed communications
- Personnel in work area may include:
- workplace personnel
 - site visitors
 - contractors
 - official representatives
- Consultative processes may involve:
- staff members
 - management
 - union representatives
 - industrial relations, OH&S specialists
 - other professional or technical staff
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Information/documents may include:
- goods identification numbers and codes
 - manifests, bar codes, and container identification/serial number
 - Australian and international codes of practice and regulations relevant to the shifting of loads using gantry equipment
 - Australian and international regulations and codes of

RANGE STATEMENT

- practice for the handling and transport of dangerous goods and hazardous substances
- operations manuals, job specifications and induction documentation
 - manufacturers specifications for equipment
 - workplace procedures and policies
 - supplier and/or client instructions
 - dangerous goods declarations and material safety data sheets
 - award, enterprise bargaining agreement, other industrial arrangements
 - relevant Australian standards and certification requirements
 - quality assurance procedures
 - emergency procedures
 - relevant codes and regulations for the shifting of cargo/containers using gantry equipment
 - Australian and international regulations and codes of practice for the handling of dangerous goods and hazardous substances, including:
 - Australian and International Dangerous Goods Codes
 - Australian Marine Orders and the International Maritime Dangerous Goods Code
 - IATA Dangerous Goods by Air regulations
 - Australian and International Explosives Codes
 - relevant Australian Standards including AS 1418 and AS 2550
 - licence, patent or copyright arrangements
 - water and road use and licence arrangements
 - export/import/quarantine/bond requirements
 - marine orders
 - relevant state/territory OH&S and environmental protection legislation
 - workplace relations regulations
 - workers compensation regulations
- Applicable regulations and legislation may include:

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

D - Load Handling

TLID4032A Plan and conduct specialised lift

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to plan and conduct a specialised lift by a mobile crane (excluding demolition work). It involves a lift which may be specialised in terms of job and equipment requirements, the qualities of the load, or the critical aspects of the location(s) of the lift. It includes inspecting the site, planning the lift, setting up the lift, working effectively in a team, lifting and moving the load, and following up on the job. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the licence/permit requirements and regulations of the relevant state/territory authorities pertaining to specialised mobile crane operations.

Work is performed under general supervision. It involves the application of some judgement and routine principles and procedures to the planning and conduct of specialised lifts in a variety of operational contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Inspect site

- 1.1 Site is inspected as required with other relevant personnel to assess job requirements
- 1.2 All necessary parameters are measured to ensure accuracy of calculations
- 1.3 Hazards are identified through inspection of site and load
- 1.4 Additional information regarding load and possible hazards is sought from customer and expert personnel
- 1.5 Special site requirements are identified

2 Plan the lift

- 2.1 Operation plan is developed in consultation with other relevant personnel to include hazard prevention/control measures in line with workplace procedures, applicable Australian standards and codes of practice
- 2.2 Where required, approval to carry out lift is obtained from the appropriate statutory authority
- 2.3 Multiple crane lifts are planned (as applicable) to encompass the determination of the types of cranes suitable for use and an assessment of the share of the load to be carried by each crane
- 2.4 Cranes load chart is interpreted and information on permissible loads, radii, weights, boom and jib taken into account in planning the job
- 2.5 Safe Working Load (SWL) or Working Load Limit (WLL) is calculated
- 2.6 Appropriate drawings and simulations are created to check feasibility of planned operations
- 2.7 Information from previous lifts is used in developing the operational plan

ELEMENT	PERFORMANCE CRITERIA
	2.8 A range of different alternatives is considered to ensure effective and safe lift
	2.9 Unsolicited, irrelevant information is disregarded to focus on the task at hand
	2.10 Need for additional/specialised equipment is ascertained and arrangements made for collection/delivery to site
	2.11 Communication system is determined and all team members are briefed on its use in conducting lift
3 Set up lift	3.1 Site measurements are checked to verify accuracy
	3.2 Operating and emergency controls are checked to ensure the crane is in safe working order
	3.3 Appropriate personal protective equipment is selected and worn in accordance with manufacturers specifications and site requirements
	3.4 Site is isolated as necessary and, when required, assistance sought to ensure public safety
	3.5 Other personnel on site are directed as necessary to ensure risks to personnel and equipment are minimised
	3.6 Variables which affect the predictability of the operation are eliminated wherever possible
4 Work effectively in team	4.1 The advice of all team members is sought in developing the operational plan
	4.2 Ideas are discussed and evaluated with team members to determine viability and reach consensus on an effective plan
	4.3 Individual roles and responsibilities are clarified and agreed
	4.4 Other team members are assisted as necessary to ensure the operation can be completed safely and efficiently
5 Lift and move load	5.1 Nominated authorised person is recognised as being in control and instructions are followed
	5.2 Test runs are conducted as necessary to ensure a safe lift
	5.3 Load is hoisted and lowered into position using crane movements in accordance with the appropriate Australian standard
	5.4 Danger is anticipated by monitoring of crane and load, and instruction to stop operation given where there are any concerns the lift is not proceeding as planned
	5.5 Potential impact of change in one area of operation on the lift as a whole is recognised
	5.6 In the event of unanticipated situations, contribution is made to developing alternative operational plan
6 Follow up on job	6.1 Specialised equipment is checked and re-stored in accordance

ELEMENT**PERFORMANCE CRITERIA**

- with workplace procedures
- 6.2 Operation is reviewed in consultation with relevant personnel and contribution is made to recommendations for review of procedures where appropriate
- 6.3 Need for further after job debriefing or counselling is recognised and appropriate action is taken
- 6.4 Records are completed promptly in line with workplace procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant road rules, regulations, permit and licence requirements pertaining to mobile crane operation
- Relevant OH&S and environmental procedures and regulations
- Mobile crane applications, capacities, configurations, safety hazards and control mechanisms
- Operational procedures for crane crews
- Prioritising and multi-tasking work
- Company work procedures concerning the setting up and rigging of a mobile crane at a work site
- Problems that may arise when planning and supervising a specialised lift using a mobile crane and actions that should be taken to prevent or solve them
- Focus of operation of work systems and equipment
- Relevant agreements, codes of practice or other legislative requirements

Required skills:

- Communicate effectively with others when planning and supervising a specialised lift using a mobile crane
- Read and interpret instructions, procedures, information, technical data, manuals and signs relevant to the planning and supervision of a specialised lift using a mobile crane
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the planning and supervision of a specialised lift using a mobile crane

Required skills:

- Operate electronic communication equipment to required protocol
- Provide leadership and work collaboratively with others when planning and supervising a specialised lift using a mobile crane
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any problems identified when planning and supervising a specialised lift using a mobile crane in accordance with regulatory requirements and workplace procedures
- Plan own work including predicting consequences and identifying improvements
- Develop contingency plans for possible unanticipated situations
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the planning and supervision of a specialised lift using a mobile crane
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Ensure the use of required personal protective equipment conforming to industry and OH&S standards

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts

EVIDENCE GUIDE

for assessment

- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Operations may be conducted:

- day or night
- in a variety of weather conditions

Environment may include movement of:

- equipment
- goods
- materials
- vehicular traffic

Customers may be:

- internal or external

Mobile crane may be involved in work in a range of industry sectors

- construction and demolition
- manufacturing

RANGE STATEMENT

including:

- waterfront
- mining
- primary industry
- utilities (electricity, gas, water)
- arboricultural
- swimming pool
- quarrying

Specialised lifts may include:

- large surface areas-pools
- tilt-up panels
- drive-in movie screens
- tree removal and replacement
- bridge beams
- multiple crane lifts
- passing loads to other cranes
- tailing out of loads
- turning loads over
- lifting high value goods
- recovery work
- specialised operations-drag lines
- clam shell
- pile driving
- barge work
- work involving work box duties

Hazards may include:

- power lines
- noise, light, energy sources
- overhead service lines
- surrounding buildings, structures, facilities
- underground services
- obstructions
- uneven or unstable ground and recently filled trenches
- stationary and moving machinery and equipment
- hazardous or dangerous materials
- traffic hazards and congestion

Hazard management is:

- consistent with the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment

Consultative processes may involve:

- other employees and supervisors
- management
- union representatives

RANGE STATEMENT

- clients
 - industrial relations and OH&S specialists
 - other professional or technical staff
- Requirements for access and/or lift may include:
- site restrictions and procedures
 - authorities and permits
 - hours of operation
 - induction
 - slings, chains, nets, brackets and other specialised lifting equipment
 - noise restrictions
 - personal protective equipment
 - support trucks
 - additional gear and equipment
 - communications equipment
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - sunscreen, sunglasses and safety glasses
 - two-way radios
 - high visibility clothing
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
 - site procedures
- Documentation/records may include:
- site plans
 - Safe Working Load (SWL) and Working Load Limit (WLL)
 - operations manuals including load charts and crane and rigging manuals
 - induction documentation
 - competency standards and training materials
 - job specifications and procedures
 - manufacturers specifications
 - workplace operating procedures and policies
 - supplier and/or client instructions
 - communications technology equipment, oral, aural or signed communications
 - personal and work area work procedures and practices
 - conditions of service, legislation and industrial agreements including:

RANGE STATEMENT

- workplace agreements and awards
 - occupational health and safety procedures
 - standards and certification requirements
 - quality assurance procedures
 - emergency procedures
- Applicable procedures and codes may include:
- relevant state/territory regulations and licence/permit requirements pertaining to specialised mobile crane operations
 - relevant state/territory road rules
 - relevant state/territory OH&S legislation
 - relevant state/territory fatigue management regulations
 - relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field D - Load Handling

TLIE3002A Estimate/calculate mass, area and quantify dimensions

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to estimate and calculate mass and area and quantify dimensions of loads as part of work functions in the transport, stevedoring, warehousing, and/or storage sectors. This includes estimating loads to be transported or placed in storage, identifying mass, area and volume limitations of available transport/storage systems and carrying out calculations required to organise load(s) to match identified transport/storage limitations. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with workplace requirements and any relevant regulations related to the estimation and/or calculation of mass and area and the quantification of dimensions as part of workplace tasks.

Work is performed under some supervision generally within a team environment. It involves the application of basic mathematical principles and operations to the estimation and/or calculation of mass and area and the quantification of dimensions as part of workplace activities in the transport, stevedoring, warehousing, distributi

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1 Estimate loads for transport or storage | 1.1 Order forms/work orders are read and requirements are noted
1.2 Shape, balance characteristics, dimensions and mass of the load(s) are identified
1.3 Area/volume required for storage is estimated
1.4 Weights and volumes are totalled to calculate load requirements of transport or storage system |
| 2 Estimate load limits of transport and/or storage | 2.1 Allowable load limits for storage and/or transport systems are identified in accordance with workplace procedures
2.2 Capacity of transport and storage systems in terms of mass, area and volume are calculated |
| 3 Organise load | 3.1 Load(s) is restricted to allowable range(s)
3.2 Load(s) is spread to ensure safe weighting on pallets, trucks, platforms or other storage or transport systems
3.3 Appropriate workplace documentation is completed |

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Australian and international codes and regulations relevant to workplace activities
- Relevant OH&S and environmental protection procedures and guidelines
- Workplace procedures and policies for the estimation and/or calculation of mass, area and volumes of loads and transport and storage facilities including the quantification of dimensions
- Basic mathematical operations required when estimating and/or calculating mass, area and volumes of loads and transport/storage facilities including addition, subtraction, multiplication and division
- Focus of operation of work systems, equipment, management and site operating systems for the transport and/or storage of goods and stock
- Problems that may occur when estimating and/or calculating mass, area and volumes of loads and transport/storage facilities and appropriate action that can be taken to resolve the problems
- Documentation requirements for the workplace activities concerned

Required skills:

- Communicate effectively with others when estimating and/or calculating mass, area and volumes of loads and transport and storage facilities
- Read and interpret instructions, procedures, information and labels relevant to the estimation and/or calculation of mass, area and volumes of loads and transport and storage facilities
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to work activities
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when estimating and/or calculating mass, area and volumes of loads and transport/storage facilities
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when estimating and/or calculating mass, area and volumes of loads and transport and storage facilities in accordance with workplace procedures
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Identify, select and use relevant calculators, computing and office equipment when estimating and/or calculating mass, area and volumes of loads and transport/storage facilities

Required skills:

- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:

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- through activities in an appropriately simulated environment at the registered training organisation, and/or
- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- | | |
|--|---|
| Work may be conducted: | <ul style="list-style-type: none"> • in a range of work environments • by day or night |
| Customers may be: | <ul style="list-style-type: none"> • internal or external |
| Workplaces may comprise: | <ul style="list-style-type: none"> • large, medium or small worksites |
| Work may be conducted in: | <ul style="list-style-type: none"> • limited or restricted spaces • exposed conditions • controlled or open environments |
| Estimating/calculation tasks may include: | <ul style="list-style-type: none"> • estimating loads to be transported or placed in storage • identifying mass, area and volume limitations of available transport/storage systems • carrying out calculations required to organise load(s) to match identified transport/storage limitations • calculations and estimations of weights and dimensions of cargo and containers to be shifted, stored or lifted |
| Calculations may include mathematical operations of addition, subtraction, multiplication and division and may be carried out: | <ul style="list-style-type: none"> • manually • with the aid of a calculator • with the aid of a computer • using appropriate tables and/or charts |
| Consultative processes may involve: | <ul style="list-style-type: none"> • other employees and supervisors • suppliers, customers and clients • relevant authorities and institutions • management and union representatives • industrial relations and OH&S specialists • other maintenance, professional or technical staff |
| Communication in the work area | <ul style="list-style-type: none"> • phone |

RANGE STATEMENT

may include:

- electronic data interchange (EDI)
- fax
- email
- internet
- radio
- RF systems
- oral, aural or signed communications

Hazards in the work area may include exposure to:

- chemicals
- dangerous or hazardous substances
- movements of equipment, goods and materials

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Information/documents may include:

- workplace procedures and policies
- operations manuals, job specifications and induction documentation
- goods identification numbers and codes
- manifests, picking slips, merchandise transfers, stock requisitions and bar codes, goods and container identification/serial number
- Australian and international codes of practice and regulations relevant to workplace activities including mass and loading regulations
- Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
- manufacturers specifications for equipment
- supplier and/or client instructions
- dangerous goods declarations and material safety data sheets (where applicable)
- award, enterprise bargaining agreement, other industrial arrangements
- relevant Australian standards and certification requirements
- quality assurance procedures
- emergency procedures

Applicable regulations and legislation may include:

- relevant codes and regulations relevant to workplace activities
- Australian and international regulations and codes of practice for the handling and transport of dangerous goods

RANGE STATEMENT

- and hazardous substances
- licence, patent or copyright arrangements
- water and road use and licence arrangements
- export/import/quarantine/bond requirements
- marine orders
- relevant state/territory OH&S and environmental protection legislation
- workplace relations regulations
- workers compensation regulations

Unit Sector(s)

Not Applicable

Competency Field

Competency Field E - Communication and Calculation

TLIE4006A Collect, analyse and present workplace data and information

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to collect, analyse and present workplace data and information including identifying required information, analysing and preparing information for use, explaining information, and presenting workplace information to others. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Data collection, analysis and presentation is carried out as an integral part of operations in the context of the workplace concerned.

Work is performed under general or limited supervision, generally within a team environment. It involves the application of established principles and practice to the collection, analysis and presentation of information and data as part of workplace operations.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| 1 Identify required information | 1.1 Purpose of the information/data collection is identified
1.2 Sources of information are established
1.3 Appropriate information is collected |
| 2 Prepare information for use | 2.1 Information is collated and analysed in accordance with workplace procedures
2.2 Processed information is organised and presented in a logical manner
2.3 Checks for accuracy are made |
| 3 Explain information | 3.1 Data collection and analysis is explained to others in a way that effectively contributes to the workplace operations
3.2 Outcomes of data/information analysis are presented to others using appropriate presentation modes and resources
3.3 Questions are answered and appropriate clarifications are given |
| 4 Present workplace information | 4.1 Processed information is forwarded to appropriate personnel in accordance with workplace procedures
4.2 Processed information is collated and stored in accordance with workplace procedures |

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant procedures and duty of care requirements
- Relevant OH&S responsibilities
- Sources of information and data and procedures for processing the information for workplace use
- Protocols and procedures for the collection, analysis and presentation of workplace information and data using relevant technology
- Presentation and communication techniques including an understanding of barriers to effective communication and how to overcome them
- Basic principles of effective presentation and communication of information
- Techniques for communicating effectively with a multilingual persons or persons with a limited ability to speak or understand English
- Typical presentation and communication problems and appropriate action and solutions

Required skills:

- Communicate effectively with others when collecting, analysing and presenting workplace data and information
- Read and interpret instructions and procedures relevant to the collection, analysis and presentation of workplace data and information
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the collection, analysis and presentation of workplace data and information
- Identify and use required communication and presentation technology
- Work collaboratively with others when collecting, analysing and presenting workplace data and information
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when collecting, analysing and presenting workplace data and information in accordance with regulatory requirements and workplace procedures
- Plan own work including predicting consequences and identifying improvements
- Implement contingency plans for unanticipated situations that may arise when collecting, analysing and presenting workplace data and information
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments

Required skills:

- Work systematically with required attention to detail
- Operate and adapt to differences in equipment in accordance with standard operating procedures

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated

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environment at the registered training organisation, and/or

- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Data collection, analysis and presentation will be:

- that required for workplace operations
- may occur by day or night and in a variety of work contexts

Customers may be:

- internal or external

Presentation modes may include:

- written documentation
- oral reports
- group presentations using appropriate technology
- completion of standard forms and checklists
- routine written reporting
- entry of collected/processed information into a computer
- participation in workplace discussions

Presentations/communications may involve:

- English-speaking persons
- multilingual staff
- persons with limited ability to communicate in English

Presentation/communication problems may include:

- misunderstanding
- limited ability of others to communicate in English
- noisy environments or communications channels
- illegible writing or print
- use of non-standard vocabulary
- incorrect assumption that information has been received and/or correctly understood

Depending on workplace context, consultative processes may involve

- managers
- supervisors/team leaders
- workplace personnel
- clients
- private and/or public sector security personnel
- police

RANGE STATEMENT

- security consultants
 - visitors
 - contractors
 - official representatives
 - union representatives
 - industrial relations
 - OH&S specialists
 - other professional or technical staff
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Presentation/communication may involve the use of a range of technology, including:
- phone
 - electronic data interchange
 - fax
 - email
 - internet
 - radio
 - overhead or computer controlled projector
 - plain or electronic white board
 - flip charts
 - microphone and amplifier
 - video player and monitor
- Information/documentation may include:
- workplace procedures, checklists and instructions
 - operations manuals
 - induction documentation
 - competency standards and training materials
 - job specifications
 - manufacturers specifications
 - HAZCHEM and dangerous/hazardous goods codes
 - goods identification numbers and codes
 - manifests, bar codes, goods and container identification
 - manufacturers specifications
 - workplace policies
 - supplier and/or client instructions
 - material safety data sheets
 - relevant codes of practice including the national standards for manual handling and the industry safety code
 - legislation, regulations and related documentation
 - award, enterprise bargaining agreement, other industrial

RANGE STATEMENT

Applicable regulations and legislation may include:

- arrangements
- standards and certification requirements
- quality assurance procedures
- emergency procedures
- relevant regulations, standards and codes of practice, including the national standards for manual handling and industry safety codes
- dangerous goods and freight regulations and codes
- relevant Australian and state/territory standards and certification requirements
- relevant Australian and state/territory OH&S legislation
- equal employment legislation and related policies
- environmental protection regulations

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

E - Communication and Calculation

TLIF1002B Conduct housekeeping activities

Modification History

Not applicable.

Unit Descriptor

This unit involves the skills and knowledge required to conduct housekeeping activities in the workplace, including identifying required housekeeping requirements, procedures and resources for different areas of the workplace; monitoring and maintaining cleanliness and tidiness in the workplace; and completing assigned housekeeping tasks.

Licensing, legislative, regulatory and certification requirements are applicable to this unit.

Application of the Unit

Work must be carried out in accordance with workplace housekeeping procedures.

Work is performed under some supervision generally in a team environment. It involves the application of basic safety principles to the completion of housekeeping tasks as part of workplace operations.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1 Identify the housekeeping requirements, procedures and resources of different areas of the workplace

- 1.1 Workplace procedures for housekeeping are identified
- 1.2 Equipment and consumables are selected in accordance with work area requirements
- 1.3 Specific requirements for housekeeping activities in different parts of the work area are identified and followed

2 Monitor and maintain cleanliness and tidiness in the workplace

- 2.1 Initiative is used to continuously monitor the cleanliness and tidiness of the worksites
- 2.2 Housekeeping issues are raised with designated personnel in accordance with workplace procedures
- 2.3 Housekeeping equipment is operated in accordance with manufacturer instructions and company policy
- 2.4 Housekeeping equipment and supplies are maintained and stored

3 Complete assigned housekeeping duties

- 3.1 Assigned housekeeping duties are conducted following workplace procedures and ensuring that waste is removed
- 3.2 Maintenance requirements of any damaged items are notified to appropriate personnel
- 3.3 Schedules and records for housekeeping duties are maintained
- 3.4 Work areas are checked and meet required workplace standards
- 3.5 Work is carried out following enterprise practices and safe work procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

REQUIRED KNOWLEDGE AND SKILLS

Required knowledge:

- Workplace procedures and policies for carrying out housekeeping tasks in the workplace
- Risks when carrying out housekeeping tasks and related precautions to control them
- Housekeeping standards required in the workplace
- Purpose of housekeeping within the workplace
- Site layout and obstacles
- Servicing procedures for housekeeping equipment
- Relevant enterprise practices and safe work procedures for the job role

Required skills:

- Communicate effectively with others when carrying out housekeeping tasks
- Interpret and follow operational instructions and prioritise work
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when carrying out housekeeping tasks
- Report and rectify within limits of own role problems, faults and malfunctions identified when carrying out housekeeping tasks in accordance with regulatory requirements and workplace procedures
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during housekeeping activities
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Monitor condition and performance of housekeeping tools and equipment
- Service housekeeping tools and equipment in terms of servicing schedule and standard operating procedures
- Select and use required personal protective equipment (PPE), conforming to industry and OH&S standards
-
-

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of:
 - identifying workplace housekeeping requirements
 - undertaking housekeeping in the workplace

Context of and specific resources for assessment

- Access is required to:
 - relevant and appropriate materials and equipment to meet the performance criteria
 - applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Practical assessment must occur:
 - in three different activities of the job role in the workplace
 - if in a simulated work environment, using industry-standard equipment

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Housekeeping tasks may be conducted:

- in a range of work environments
- by day or night

Customers may be:

- internal or external

Workplaces may comprise:

- large, medium or small worksites

Work may be conducted in:

- tight or restricted spaces
- exposed conditions
- controlled or open environments

Housekeeping duties may include:

- cleaning
- returning goods or equipment to storage
- repacking
- waste removal
- maintenance

- Hazards in the work area may include exposure to:**
- chemicals
 - dangerous or hazardous substances
 - movement of equipment, goods and materials
- Personnel in the work area may include:**
- workplace personnel
 - site visitors
 - contractors
 - official representatives
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:**
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Depending on workplace context, PPE may include:**
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - high visibility clothing
 - eye wash
- Information and documents may include:**
- OH&S and environmental protection regulations
 - workplace housekeeping procedures and policies
 - codes of practice, including the National Standard for Manual Handling and the industry safety code
 - material safety data sheets
 - policies and procedures for entry and work in confined spaces
 - manufacturer instructions concerning the use and servicing of equipment
 - supplier and customer instructions
 - emergency procedures
 - regulations and policies concerning noise, smoking, work station ergonomics and other critical OH&S issues
 - goods identification numbers and codes
 - manifests, bar codes, goods and container identification
 - relevant legislation, regulations and related documentation
 - award, enterprise bargaining agreement, other industrial arrangements
 - standards and certification requirements
 - quality assurance procedures
- Applicable regulations and legislation may include:**
- relevant state and territory:
 - OH&S legislation
 - environmental protection legislation
 - workplace relations regulations

- dangerous goods and air freight regulations
-

Unit Sector(s)

Not Applicable

Competency Field

Competency Field F - Safety Management

TLIF2010A Apply fatigue management strategies

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to apply fatigue management strategies, including identifying and acting upon signs of fatigue and implementing appropriate strategies to minimise fatigue during work activities, in accordance with legislative and regulatory requirements. Licensing or certification requirements are not applicable to this unit.

Application of the Unit

Application of the Unit

Persons achieving competence in this unit will need to fulfil the applicable federal and state/territory legislation and relevant regulations covering the management of fatigue in the workplace.

Work is performed under some supervision generally within a team environment. It involves the application of the relevant regulations, codes and guidelines of the federal government and state/territory authorities concerning fatigue management during work activities and in particular when operating equipment, trains, vehicles, load shifting equipment, marine vessels and aircraft.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|--|
| 1 Identify and act upon signs of fatigue | <p>1.1 Potential causes of fatigue are identified and action is taken to minimise their effects in accordance with company procedures</p> <p>1.2 Personal warning signs of fatigue are recognised and necessary steps are taken in accordance with workplace procedures to ensure that effective work capability and alertness are maintained</p> |
| 2 Implement strategies to minimise fatigue | <p>2.1 Workplace procedures are assessed to minimise fatigue</p> <p>2.2 Factors which increase the risk of fatigue-related accidents and safety incidents are understood and minimised</p> <p>2.3 Strategies to manage fatigue are implemented in accordance with company policy</p> <p>2.4 Lifestyle choices are made which promote the effective long-term management of fatigue</p> <p>2.5 Effective practices in combating fatigue are adopted and applied</p> <p>2.6 Personal fatigue management strategies are communicated to other relevant people</p> <p>2.7 Appropriate counter measures are planned to combat fatigue</p> |

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

REQUIRED KNOWLEDGE AND SKILLS

Required knowledge:

- Relevant codes, regulations, permit and licence requirements related to fatigue management
- Relevant OH&S regulations as they relate to fatigue
- Workplace policies and procedures related to fatigue management and the control of factors that can contribute to fatigue and fatigue-related accidents
- Sources of information on fatigue
- The risks and hazards created by fatigue in the workplace
- How fatigue affects workplace performance
- How fatigue contributes to workplace accidents
- Ways of recognising fatigue
- Strategies and ways of managing fatigue
- Causes and effects of fatigue on workers/drivers
- Factors which increase fatigue-related accidents
- Lifestyles which promote the effective long-term management of fatigue

Required skills:

- Communicate effectively with others when applying fatigue management strategies
- Read and interpret instructions, procedures, regulations and signs related to fatigue management and apply them to work activities
- Recognise symptoms of fatigue and take appropriate action in accordance with fatigue management regulations and workplace procedures
- Work collaboratively with others to manage and minimise the effects of fatigue during work activities
- Adjust lifestyle patterns to ensure effective fatigue management during work activities
- Modify activities and take appropriate initiatives to manage fatigue in the workplace depending on differing work contexts, risk situations and environments
- Apply precautions and required action to minimise and control the effects of fatigue when carrying out own work functions
- Adapt to changes in rosters and standard operating procedures as they may relate to fatigue management
- Participate in identifying and meeting own learning needs on matters related to fatigue management

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and other/or simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and/or equipment, and/or
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Workplace may include:

- any work environment requiring safety critical operational judgements to be made and in particular when operating equipment, vehicles, load shifting equipment, trains, marine vessels and aircraft at night

The need for fatigue management in a range of industry situations including:

- operations conducted at all times but particularly at night
- typical weather conditions
- while working and/or driving at a workplace, depot, base or warehouse
- while working and/or driving at a client's workplace or worksite
- driving a motor vehicle on the open road
- driving a motor vehicle on a private road
- driving a train, locomotive or motive power unit
- operating a marine vessel in coastal or international waters
- operating an aircraft
- operating load shifting equipment
- operating safety critical industrial plant and equipment

Work-related factors that may contribute to fatigue include:

- work demands such as: workload, work duration, shift pattern, time of day, frequency and duration of breaks and the type of work (such as working in isolation, repetitive tasks and boring, monotonous or under-challenging tasks)
- organisational factors such as: work environment (including temperature, ventilation, continual rhythmic vibration from equipment), payment system, trip and work scheduling, and the predictability of work

Worker/operator-related factors that may contribute to fatigue include:

- lifestyle factors such as: sleep patterns, alcohol and drug use, quantity and timing of food and drink, and opportunities for relaxation with family and friends
- working multiple jobs
- personal or biological factors such as: state of mental and/or physical health, inadequate sleep, sleep disorders, emotional stress, family responsibilities, relationship difficulties, inadequate competence to complete work tasks, and circadian rhythms

Responsibilities of individual for fatigue risk management may include:

- following the organisation's fatigue management policy and procedures
- using time away from work appropriately to rest and recover
- checking and ensuring fitness for work
- reporting symptoms of fatigue

RANGE STATEMENT

- Schedules may include:
- taking action to minimise risk when symptoms of fatigue are recognised
 - rosters
 - vehicle schedules
 - timetabling
 - workplans
- Depending on the organisation, operating procedures may include:
- standard operating procedures
 - company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Information and documents may include:
- federal and state/territory regulations and guidelines concerning fatigue management in various transport and workplace situations
 - workplace instructions and procedures on fatigue management
 - relevant OH&S regulations and procedures
 - work schedules and shift rosters
 - emergency procedures
 - log book or record book (where required)
 - records and reports of fatigue-related errors and safety incidents
 - relevant standards and certification requirements
 - quality assurance procedures
- Applicable legislation, regulations and codes may include:
- relevant regulations and codes of the federal government and the state/territory regulatory authorities concerning fatigue management
 - relevant state/territory road rules
 - relevant rail industry safe working codes and regulations (where applicable)
 - relevant state/territory permit regulations and requirements
 - relevant state/territory OH&S legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field F - Safety Management

TLIF4007A Implement and coordinate accident-emergency procedures

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to implement and coordinate accident-emergency procedures, including responding to the incident, conducting on-site activities, and completing follow-up actions. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the relevant regulations and workplace procedures concerning action to be taken in the event of an emergency, fire or accident.

Work is performed under some supervision generally within a team environment. It involves the application of the basic emergency response principles to the implementation of accident-emergency procedures including the provision of assistance ranging from simple injuries to the application of life support systems.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1 Respond to the incident | <p>1.1 Details of incidents, accidents and emergencies are received, analysed and confirmed</p> <p>1.2 Immediate coordination requirements are identified and actioned in accordance with organisation procedures</p> <p>1.3 Travel to the incident site is by the shortest, fastest, legal means and routes</p> |
| 2 Coordinate on-site activities | <p>2.1 Control of site activities is assumed on arrival and the operator and other authorities present are informed of this action</p> <p>2.2 Assistance is provided to clients and operators within the limitations of duty of care and organisation requirements</p> <p>2.3 Details of personnel, including names and nature of injuries, are notified to relevant personnel, following enterprise procedures</p> <p>2.4 Assistance is provided to relevant authorities within legal and policy limitations</p> |
| 3 Complete follow-up actions | <p>3.1 Details of affected personnel, including names, nature of injuries and follow-up treatments are notified to next-of-kin in accordance with organisation procedures</p> <p>3.2 Incidents resulting in a near miss, accident or emergency are investigated and a report, including recommendations, is completed in accordance with enterprise policies and procedures</p> <p>3.3 Accident procedures and emergency plans are reviewed for effectiveness and recommendations for changes are prepared and submitted to appropriate persons</p> |

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant OH&S and other regulatory codes, procedures and guidelines concerning response to accidents and emergencies
- Risks and hazards in the workplace and related precautions to control the risk
- Workplace procedures and policies for responding to accident/emergency situations
- Types of accidents and emergencies that can occur in a workplace and the appropriate action to be taken in each case
- Types of emergency equipment in the workplace and instructions for its use
- Site layout and obstacles
- Means to control and organise the accident scene, provide practical assistance and cooperate with others at the scene
- Focus of operation of work systems, equipment, management and site operating systems

Required skills:

- Communicate effectively with others when implementing and coordinating accident and emergency procedures
- Read and interpret instructions, procedures, information and signs relevant to the implementation and coordination of accident and emergency procedures
- Identify containers and goods coding, ADG and IMDG markings and where applicable emergency information panels
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the implementation and coordination of accident and emergency procedures
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when implementing and coordinating accident and emergency procedures
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may arise when implementing and coordinating accident and emergency procedures in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unplanned events that may occur when implementing and coordinating accident and emergency procedures
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities

Required skills:

- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Identify, select and use emergency equipment, processes and procedures
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and

EVIDENCE GUIDE

Method of assessment	<p style="text-align: center;">operation manuals</p> <ul style="list-style-type: none"> • Assessment of this unit must be undertaken by a registered training organisation • As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests • Practical assessment must occur: <ul style="list-style-type: none"> • through activities in an appropriately simulated environment at the registered training organisation, and/or • in an appropriate range of situations in the workplace
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Work may be conducted:	<ul style="list-style-type: none"> • in a range of work environments and weather conditions • by day or night
Customers may be:	<ul style="list-style-type: none"> • internal or external
Workplaces may comprise:	<ul style="list-style-type: none"> • large, medium or small worksites
Work may be conducted in:	<ul style="list-style-type: none"> • restricted spaces • exposed conditions • controlled or open environments
Action to be taken in the event of an accident-emergency may include:	<ul style="list-style-type: none"> • identifying and following established emergency procedures • assessing the nature and extent of the emergency • rendering assistance and first aid • isolating and coordinating safety of the scene • alerting relevant organisational personnel and emergency services • recording relevant information and reporting on accident/emergency situation in accordance with regulatory and workplace requirements
Emergency equipment may include:	<ul style="list-style-type: none"> • first aid kit • fire extinguishers • fire hose

RANGE STATEMENT

- Hazards in the work area may include:
- fire blanket
 - resuscitation equipment
 - exposure to chemicals
 - exposure to dangerous or hazardous substances
 - movements of equipment, goods and materials
 - accidents involving chemicals, toxic substances and other harmful substances
 - accidents involving equipment and vehicles
 - explosion and/or fire
 - personal accidents including lifting injuries
 - waste management and disposal
 - violent incidents such as armed robberies
- Consultative processes may include:
- workplace personnel and management
 - designated workplace emergency officers
 - emergency services personnel including ambulance, police, fire services, etc.
 - union representatives
 - industrial relations and OH&S specialists
 - other professional or technical staff
 - site visitors
 - contractors
 - official representatives
- Communication in the work area may include:
- phone
 - electronic data interchange
 - fax
 - email
 - internet
 - radio
 - oral, aural or signed communications
- Personal protective equipment may include:
- gloves
 - safety headwear and footwear
 - safety glasses
 - two-way radios
 - high visibility clothing
 - breathing apparatus
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Information/documents may
- workplace emergency/fire/accident procedures

RANGE STATEMENT

include:

- workplace procedures for the use of emergency equipment and personal protection equipment
- first aid instructions and procedures
- manufacturers instructions concerning the use and servicing of equipment
- manifests, bar codes, goods and container identification goods identification numbers and codes
- material safety data sheets
- codes of practice including the Dangerous Goods Code
- IMDG code markings, HAZCHEM codes and where applicable emergency information panels
- relevant legislation, regulations and related documentation related to emergency response situations
- award, enterprise bargaining agreement, other industrial arrangements
- relevant Australian standards and certification requirements
- quality assurance procedures
- supplier and/or client advice on the hazards involved with goods or cargo
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation
- emergency procedures regulations
- dangerous goods and hazardous goods regulations
- relevant Australian standards and certification including Australian Standard AS 2865 - Safe Working in a Confined Space Code
- workplace relations regulations
- workers compensation regulations

Applicable regulations and legislation may include:

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

F - Safety Management

TLIH2001A Interpret road maps and navigate pre-determined routes

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to interpret road maps and navigate routes as part of transport operations. It includes identifying and determining the most appropriate route, and completing required route documentation in accordance with operational requirements. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the regulations of the relevant state/territory roads and traffic authorities.

Work is performed under general or limited supervision. It involves the application of the basic map reading principles and procedures when interpreting street directories and road maps and following pre-determined routes as part of transport operations.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Identify and determine the pre-planned route

- 1.1 Documentation on the pre-determined route is accessed and interpreted
- 1.2 Relevant street directory, global positioning system (GPS) and road maps are identified and accessed
- 1.3 Street directory, GPS and road map symbols are recognised and interpreted
- 1.4 Points of departure and destination are identified in a directory index and the information is used to locate designated places on the appropriate map
- 1.5 Directions for a pre-determined route are interpreted and the route is traced using a street directory, GPS and road map
- 1.6 Key intersections and other landmarks along the route are identified for use in following the planned route
- 1.7 Alternative routes are identified for possible contingency situations such as emergencies or traffic delays
- 1.8 Pre-determined route is correctly followed

2 Complete necessary documentation

- 2.1 Required route documentation is completed in accordance with purpose of transportation and with workplace requirements

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant state and territory permit and licence regulations and requirements

REQUIRED KNOWLEDGE AND SKILLS

- Operational procedures for interpreting road maps, using GPS devices and navigating routes
- Road conditions for various routes, including sections undergoing road works
- Height, width and mass limitations of bridges, tunnels and other critical physical structures along a possible route
- Traffic conditions at various times of the day along specific routes
- Security hazards and issues (where relevant)
- Current information on accidents or emergencies that might close or restrict traffic on a particular route
- Location of service stations/rest stops where relevant
- Typical problems that may arise concerning the interpretation of road maps, the use of GPS devices and the navigation of pre-determined routes, and appropriate action that should be taken
- Workplace requirements for recording and documenting route information

Required skills:

- Communicate effectively with others when interpreting road maps, using GPS devices and navigating pre-determined routes
- Read and interpret instructions, procedures, information and signs relevant to route navigation
- Identify and correctly use maps and other route documentation including: identification of town and suburb locations, identification of roads and intersections, reading and interpretation of map symbols, and estimation of route distances using map information
- Where applicable, use GPS devices to navigate pre-determined routes
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to route navigation
- Operate electronic communication equipment to required protocol
- Where applicable work collaboratively with others (such as fleet managers, sales team etc.) when interpreting road maps, using GPS devices and navigating pre-determined routes
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when interpreting road maps, using GPS devices and navigating pre-determined routes in accordance with workplace procedures
- Plan for alternative routes in the event of contingencies such as road works, emergencies or delays
- Plan own work including predicting consequences and identifying improvements
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments

Required skills:

- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of:
 - applying the underpinning knowledge and skills
 - applying relevant legislation and workplace procedures
 - plotting a route from one destination to another relevant to the job role
 - demonstrating the ability to navigate a pre-determined route

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- As a minimum, assessment of knowledge must be

EVIDENCE GUIDE

conducted through appropriate assessments using written/practical/oral assessments

- Practical assessment must occur:
 - through activities in an appropriately simulated environment, and/or
 - in an appropriate range of situations in the workplace
- A simulator/online assessment is not suitable for the final assessment of this unit of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- | | |
|--|--|
| This unit covers: | <ul style="list-style-type: none"> • work of transport and distribution personnel involved in the delivery of a range of possible goods and materials including valuables, secured products and documents and materials |
| Operations may be conducted: | <ul style="list-style-type: none"> • in a range of work environments and weather conditions • by day or night |
| Customers may be: | <ul style="list-style-type: none"> • internal or external |
| Routes will be pre-determined but may include: | <ul style="list-style-type: none"> • alternative routes to accommodate contingency situations |
| Map areas may include: | <ul style="list-style-type: none"> • metropolitan areas • country and regional areas • interstate locations |
| Depending on the type of transport service being provided, consultative processes may involve: | <ul style="list-style-type: none"> • clients • other employees and supervisors • management • other professional or technical staff • private security personnel • public sector security personnel • police and other emergency services • security consultants |
| Communication in the work area may include: | <ul style="list-style-type: none"> • mobile and fixed phones • radio |

RANGE STATEMENT

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

Information/documents may include:

Applicable regulations and legislation may include:

- oral, aural or signed communications
- company procedures
- enterprise procedures
- organisational procedures
- established procedures
- workplace procedures and policies
- route specifications
- maps and street directories
- published information on route hazards such as height, width and mass limitations of bridges, tunnels and other critical physical structures along a possible route
- competency standards and training materials
- supplier and/or client route documentation
- quality assurance procedures
- emergency procedures
- relevant state/territory road rules and traffic acts
- regulations and codes related to the transport of dangerous goods, explosives and hazardous materials

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

H - Route Planning and Navigation

TLILIC2001A Licence to operate a forklift truck

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor	This unit specifies the outcomes required for the operation of a powered industrial truck equipped with a mast and an elevating load carriage to which is attached a pair of fork arms or other attachment, for licensing purposes. This definition also includes a truck on which the operator is raised with the attachment for order-picking.
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Application of the Unit

Application of the Unit	<p>THIS UNIT REQUIRES THE OPERATOR TO BE ABLE PLAN THE WORK, CONDUCT ROUTINE CHECKS ON THE FORKLIFT, SHIFT LOADS IN A SAFE MANNER, AND SHUT DOWN AND SECURE THE EQUIPMENT AFTER THE COMPLETION OF OPERATIONS.</p> <p>This unit is based on the National Standard for Licensing Persons Performing High Risk Work.</p> <p>This unit in its current form meets state and territory licensing requirements. Any alteration will result in a unit which is not acceptable to regulators for the purpose of licensing.</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT <i>Elements describe the essential outcomes of a unit of competency.</i>	PERFORMANCE CRITERIA <i>Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.</i>
1. Plan work	1.1 Potential workplace <i>hazards</i> are identified 1.2 <i>Hazard control measures</i> are identified consistent with <i>appropriate standards</i> to ensure the safety of personnel and equipment 1.3 Appropriate <i>forklift</i> truck is selected according to the load and workplace conditions 1.4 Working area is inspected to determine appropriate path of movement for loads and forklift truck 1.5 <i>Communication methods</i> are identified according to <i>procedures</i>
2. Conduct routine checks	2.1 Forklift is visually checked for any damage or defects 2.2 All <i>signage and labels</i> are visible and legible according to the <i>appropriate standard</i> 2.3 All controls are located and identified 2.4 <i>Pre-start operational checks</i> are carried out according to <i>procedures</i> 2.5 <i>Forklift</i> is started according to <i>procedures</i> and checked for any abnormal noise 2.6 <i>Post-start operational checks</i> are carried out according to <i>procedures</i> 2.7 All forklift functions and safety devices are tested to their maximum according to <i>procedures</i>

	2.8 Defects and damage are reported and recorded according to <i>procedures</i> , and appropriate action is taken
3. Shift load	<p>3.1 The weight of load is assessed to ensure compliance with <i>forklift</i> truck data plate specifications</p> <p>3.2 Appropriate <i>hazard prevention/control measures</i> are implemented and communicated with personnel in the work area</p> <p>3.3 <i>Forklift</i> is operated at a safe speed and according to <i>procedures</i></p> <p>3.4 Loads are moved and placed to ensure stability of material and avoidance of hazards</p> <p>3.5 Load movement is monitored constantly ensuring safety to personnel and load, and structural stability</p> <p>3.6 <i>Unplanned and/or unsafe situations</i> are responded to in line with <i>procedures</i></p>
4. Shut down and secure forklift truck	<p>4.1 <i>Forklift</i> truck is parked to avoid hazards</p> <p>4.2 Forklift is <i>shut down</i> according to <i>procedures</i></p> <p>4.3 Routine post-operational forklift checks are carried out according to <i>procedures</i></p> <p>4.4 Forklift is secured to prevent unauthorised access/use</p> <p>4.5 All defects and damage are reported and recorded according to <i>procedures</i>, and appropriate action is taken</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Required skills:

- Accurately interpret information relating to conducting forklift truck operations (e.g. procedures)
- Safely conduct forklift truck operations including all functions to the maximum height and load capacity
- Identify hazards associated with the operation of the forklift truck, assess risks and put into place effective hazard prevention/control measures for those hazards identified
- Use communication skills at a level sufficient to communicate with other site personnel (e.g. receive and interpret work instructions, safety information, emergency procedures)

REQUIRED SKILLS AND KNOWLEDGE

- Drive forklift with load in forward and reverse, maintaining visibility
- Verify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge:

- Methodology of determining the weight of a load
- Commonwealth, state or territory OH&S legislation, standards relevant to the safe operation for the forklift trucks
- Understanding of forklift characteristics and capabilities (including use of load data plates)
- Understanding of the hierarchy of hazard identification and control
- Organisational and workplace standards, requirements, policies and procedures for conducting operations for the crane class
- Procedures for the recording, reporting and maintenance of workplace records and information
- Forklift truck operations and safe operating techniques
- Typical routine problems encountered in the operation of the crane and equipment and adjustments required for correction

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for the Training Package.

Overview of assessment

- Successful assessment of this unit meets the competency requirement of the National Standard for Licensing Persons Performing High Risk Work.
- State/territory OH&S regulators have mandated the use of Assessment Instruments and Instructions for Assessment for this unit which have been endorsed by the national body responsible for OH&S matters.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Compliance with OH&S licensing legislation.
- Communicate and work safely with others in the work area.
- Identify hazards associated with the operation of the forklift truck and put in place effective hazard controls for those hazards identified.

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • Conduct pre-start-up, operational, moving loads and shut down and secure checks of the forklift truck according to procedures. • Operate the forklift truck and move loads safely, including driving and manoeuvring, picking up and placing of loads at various stack heights. • Drive forklift truck with load in forward and reverse, maintaining visibility.
Context of and specific resources for assessment	<ul style="list-style-type: none"> • Assessment of the safe application of knowledge and skills to workplace tasks (performance) must be undertaken using the endorsed Assessment Instrument. • Assessment of performance must be undertaken either in the workplace or in a realistically simulated workplace setting. • Assessment must occur under standard and authorised work practices, safety requirements and environmental constraints. • Applicants must have access to: <ul style="list-style-type: none"> • Personal Protective Equipment (PPE) for the purpose of the Performance Assessment • associated equipment appropriate to forklift truck operations • suitable loads as described by the endorsed Assessment Instrument • manufacturers specifications • appropriate forklift truck in a safe condition.
Method of assessment	<ul style="list-style-type: none"> • Assessment must be conducted using the endorsed Assessment Instrument. These Instruments provide instruction on their application. • The use of 'simulators' in the assessment of this unit of competency is not acceptable. • Assessment may be in conjunction with the assessment of other units of competency. • Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge. • Assessment must confirm a reasonable inference that competency is not only able to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.
Guidance information for	<ul style="list-style-type: none"> • Further information about endorsed Assessment Instruments may be obtained from state/territory

EVIDENCE GUIDE**assessment**

OH&S regulators.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below.

Hazards

May include but not limited to:

- ground conditions (e.g. condition of pavement, slopes)
- overhead hazards (e.g. powerlines, service pipes)
- insufficient lighting
- traffic (e.g. pedestrians, vehicles, other plant)
- weather (e.g. wind, lightning, rain)
- forklift instability (e.g. overloading, poor load placement, irregular loads)
- other hazards (e.g. dangerous materials)

Hazard control measures

Refers to the systematic process of eliminating or reducing the risk to personnel and property through the application of controls

It includes the application of the hierarchy of control, the six-step preference of control measures to manage and control risk:

- 1 elimination
- 2 substitution
- 3 isolation
- 4 engineering control measures
- 5 using safe work practices
- 6 personal protective equipment

Appropriate standards

May include but not limited to:

- legislation
- Australian standards
- manufacturer's specifications
- industry standards (where applicable)

RANGE STATEMENT	
Forklift truck	<p>May include but not be limited to:</p> <ul style="list-style-type: none"> • counterbalanced • reach trucks • rough terrain • internal combustion petrol, diesel, gas • electric
Communications methods	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal and non-verbal language • written instructions • signage • hand signals • listening • questioning to confirm understanding • appropriate worksite protocol
Procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • manufacturer's guidelines (instructions, specifications or checklists) • industry operating procedures • workplace procedures (work instructions, operating procedures, checklists)
Pre-start operational checks	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • safety devices fitted where appropriate • forklift data plate fitted and interpreted • logbook, handbook or operating manuals available • external visual check including, evidence of damage, leaks, visual evidence of structural weaknesses (including paint separation or stressed welds) is carried out • forklift attachment is checked for security • approved modifications and/or attachments fitted to manufacturer's specifications (e.g. as per forklift or attachment data plate) are identified • checks for adaptations or modifications outside manufacturer's specifications (e.g. not listed on the forklift or attachment data plate) are carried out • maintenance logbook/records checked

RANGE STATEMENT	
Post-start operational checks	<p>May include checks of the forklift truck and equipment after start-up to ensure:</p> <ul style="list-style-type: none"> • hazard warning systems (for example lights and horns), are functional • attachment movements and control functions are smooth and comply with operating requirements • steering, transmission and brake functions comply with operating requirements
Hazard prevention/control measures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • barricades and traffic control • safety tags on electrical switches/isolators • insulated powerlines • safety observer used inside exclusion zone • disconnected power • pedestrian control (barricades, signs, etc.) • excavation safeguards • movement of obstructions • personal protective equipment • adequate illumination
Unplanned and/or unsafe situations	<p>May include but not limited:</p> <ul style="list-style-type: none"> • failure/loss of control (e.g. brakes and steering) • failure of equipment (e.g. hydraulic system) • environmental condition
Shut down	<p>May include, but is not limited to:</p> <ul style="list-style-type: none"> • parking in a suitable location away from dangerous areas • fork arms are correctly positioned (tips down, tilted forward, lowered to ground) • appropriate transmission/gear is selected for parking (relevant to transmission type) • hand/parking brake is applied • engine power is turned off • ignition key is removed (if applicable) • LPG gas cylinder valve is shut off (where fitted) • securing equipment against unauthorised operation • securing the site • ensuring access ways are clear • identifying and segregating defective equipment

RANGE STATEMENT	
	and reporting to authorised personnel <ul style="list-style-type: none">• batteries are connected to the charger (if applicable)

Unit Sector(s)

Not Applicable

TLILIC2016B Licence to drive a heavy rigid vehicle

Modification History

New release. This unit replaces and is equivalent to TLILIC2016A.

Unit Descriptor

This unit involves the skills and knowledge required to obtain a licence to drive a heavy rigid vehicle. It includes systematically and efficiently controlling all vehicle functions, monitoring traffic and road conditions, managing vehicle condition and performance, and effectively managing hazardous situations.

Assessment of this unit will be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory driver licensing authority.

Application of the Unit

This unit applies to driving that is carried out in compliance with the licence requirements and regulations of the relevant state/territory driver licensing authority pertaining to heavy rigid vehicles.

Driving is performed with limited or minimum supervision, and with limited accountability and responsibility for self and others in achieving the prescribed outcomes.

Driving involves the application of routine vehicle driving principles and procedures to maintain safety and operate a heavy rigid vehicle across a variety of driving contexts.

The primary legislative requirements applicable to this unit of competency are state/territory legislation in relation to road use and driver licensing.

This unit addresses the knowledge and skills necessary for the granting of a Heavy Rigid Driver Licence.

Being awarded this unit of competency is a necessary requirement to obtain a Heavy Rigid Driver Licence but is only one of several criteria. Prospective licence applicants should check with the state/territory driver licensing authority for other criteria (such as licence tenure and medical fitness) to confirm compliance with other eligibility requirements before undertaking training and/or assessment.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | |
|---|---|
| 1 Drive a heavy rigid vehicle | <ul style="list-style-type: none">1.1 Heavy rigid vehicle is started, steered, manoeuvred, positioned and stopped according to traffic regulations, manufacturer instructions and relevant vehicle handling procedures1.2 Engine power is managed to ensure efficiency and performance, and to minimise engine and gear damage1.3 Braking system of heavy rigid vehicle is managed and operated efficiently to ensure effective control of vehicle under all conditions1.4 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving1.5 Heavy rigid vehicle is driven in reverse, maintaining visibility and achieving accurate positioning1.6 Heavy rigid vehicle is parked, shutdown and safely secured according to traffic regulations1.7 Load is safely and effectively restrained |
| 2 Monitor traffic and road conditions | <ul style="list-style-type: none">2.1 Traffic and road conditions are constantly monitored and acted upon to enable safe operation and to ensure no injury to people or damage to property, equipment, loads and facilities2.2 Interaction with other road users is conducted courteously according to road rules to ensure safe and efficient traffic flow |
| 3 Monitor and maintain vehicle performance | <ul style="list-style-type: none">3.1 Vehicle performance is maintained through pre-operational inspections and vehicle checks3.2 Appropriate signage, lights and equipment are checked for operational effectiveness and for conformity to prescribed traffic regulations |

Required Skills and Knowledge

This section describes the knowledge and skills required for this unit.

Required knowledge:

- Driving hazards and related defensive driving techniques
- Efficient driving techniques
- Engine power management and safe driving strategies
- Heavy rigid vehicle controls, instruments and indicators and their use
- Heavy rigid vehicle handling procedures
- Pre-operational checks carried out on vehicle and related action
- Relevant state/territory driver licensing authority road rules, regulations, permit and licence requirements

Required skills:

- Anticipate and monitor and traffic hazards and take appropriate action
- Apply precautions and required action to eliminate, minimise or control hazards that may exist when driving a heavy rigid vehicle
- Carry out pre-operational vehicle checks
- Communicate effectively with others when driving a heavy rigid vehicle
- Read and interpret instructions, procedures, information and signs relevant to driving a heavy rigid vehicle

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include:

- applying relevant procedures that reflect legislative requirements
- negotiating a range of complex traffic infrastructure (such as roundabouts, traffic lights, stalemate intersections, railway level crossings).

Context of and specific resources for assessment

Resources for assessment include access to:

- range of relevant exercises, case studies and/or other simulated practical and knowledge assessment
- appropriate range of relevant on-road operational situations or in the workplace
- relevant and appropriate materials and equipment
- applicable documentation such as workplace procedures, regulations, codes of practice and operation manuals.

Method of assessment

Practical driving aspects must be assessed in a vehicle typical of the class as approved by the state/territory driver licensing authority. The use of simulators for driver testing is not permitted.

The assessor must use the mandatory assessment tool provided by the state/territory driver licensing authority to conduct the assessment for this unit according to licensing authority requirements.

The state/territory driver licensing authority may prescribe approved routes, which must be used for the final assessment.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Heavy rigid vehicle includes:

- Rigid vehicle, not being an unladen prime mover, with a minimum of three axles and a minimum 15 tonnes GVM
- Modified three axle prime mover with a certified detachable tray (with capacity to carry 75% of its specified GVM) with a GVM of 15 tonnes
- Three axle articulated bus
- Three axle bus above 15 tonnes GVM

Vehicle handling procedures may include:

- Accelerating and braking
- Managing engine performance
- Operating vehicle controls, instruments and indicators
- Positioning and stopping a vehicle
- Reversing a vehicle
- Starting a vehicle
- Steering and manoeuvring a vehicle
- Using defensive driving techniques

Driving hazards may include:

- Animals and objects on road
- Faulty:

- Traffic and road conditions may include:
- brakes
 - steering mechanism on vehicle
 - Fire in vehicle
 - Flooded sections of road
 - Foggy conditions
 - Leaking fuel
 - Oil on road
 - Parked vehicles on road
 - Pedestrians crossing road
 - Wet and iced roads
 - Windy sections of road
 - Negotiating a range of more complex traffic infrastructure (such as roundabouts, traffic lights, stalemate intersections, railway level crossings)
 - On open or private roads including roads with moderate inclines and declines
 - Operations conducted during the day or night
 - Typical weather conditions
 - While at a depot, base or warehouse
 - While at a client workplace or worksite
- Pre-operational inspections and equipment checks may include:
- Checking and topping up fluid levels
 - Checking:
 - brakes
 - operation of vehicle lights and indicators
 - tyre pressures
 - Visually checking vehicle

Unit Sector(s)

Not applicable.

Competency Field

LIC - Licensing

TLILIC3017B Licence to drive a heavy combination vehicle

Modification History

New release. This unit replaces and is equivalent to TLILIC3017A.

Unit Descriptor

This unit involves the skills and knowledge required to obtain a licence to drive a heavy combination vehicle. It includes systematically and efficiently controlling all vehicle functions, monitoring traffic and road conditions, managing vehicle condition and performance, coupling and uncoupling of trailer, and effectively managing hazardous situations.

Assessment of this unit will be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory driver licensing authority.

Application of the Unit

This unit applies to driving that is carried out in compliance with the licence requirements and regulations of the relevant state/territory driver licensing authority pertaining to heavy combination vehicles.

Driving is performed with limited or minimum supervision, and with limited accountability and responsibility for self and others in achieving the prescribed outcomes.

Driving involves the application of routine vehicle driving principles and procedures to maintain safety and operate a heavy combination vehicle across a variety of driving contexts.

The primary legislative requirements applicable to this unit of competency are state/territory legislation in relation to road use and driver licensing.

This unit addresses the knowledge and skills necessary for the granting of a Heavy Combination Driver Licence.

Being awarded this unit of competency is a necessary requirement to obtain a Heavy Combination Driver Licence but is only one of several criteria. Prospective licence applicants should check with the state/territory driver licensing authority for other criteria (such as licence tenure and medical fitness) to confirm compliance with other eligibility requirements before undertaking training and/or assessment.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | |
|--|--|
| 1 Drive a heavy combination vehicle | <ul style="list-style-type: none">1.1 Heavy combination vehicle is started, steered, manoeuvred, positioned and stopped according to traffic regulations, manufacturer instructions and relevant vehicle handling procedures1.2 Engine power is managed to ensure efficiency and performance, and to minimise engine and gear damage1.3 Braking system of heavy combination vehicle is managed and operated efficiently to ensure effective control of vehicle under all conditions1.4 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving1.5 Heavy combination vehicle is driven in reverse, maintaining visibility and achieving accurate positioning1.6 Heavy combination vehicle is parked, shutdown, uncoupled and safely secured according to traffic regulations1.7 Load is safely and effectively restrained |
| 2 Monitor traffic and road conditions | <ul style="list-style-type: none">2.1 Traffic and road conditions are constantly monitored and acted upon to enable safe operation and to ensure no injury to people or damage to property, equipment, loads and facilities2.2 Interaction with other road users is conducted courteously according to road rules to ensure safe and efficient traffic flow |
| 3 Monitor and maintain vehicle | <ul style="list-style-type: none">3.1 Vehicle performance is maintained through pre-operational inspections and vehicle checks |

performance

- 3.2 Appropriate signage, lights and equipment are checked for operational effectiveness and for conformity to prescribed traffic regulations
- 3.3 Prime mover and trailer are correctly aligned and coupled
- 3.4 Coupled vehicle is checked and tested to ensure it is correctly secured and to confirm it is fully operational

Required Skills and Knowledge

This section describes the knowledge and skills required for this unit.

Required knowledge:

- Driving hazards and related defensive driving techniques
- Efficient driving techniques
- Engine power management and safe driving strategies
- Heavy combination vehicle controls, instruments and indicators and their use
- Heavy combination vehicle handling procedures
- Pre-operational checks carried out on vehicle and related action
- Relevant state/territory driver licensing authority road rules, regulations, permit and licence requirements

Required skills:

- Anticipate and monitor and traffic hazards and take appropriate action
- Apply precautions and required action to eliminate, minimise or control hazards that may exist when driving a heavy combination vehicle
- Carry out pre-operational vehicle checks
- Communicate effectively with others when driving a heavy combination vehicle
- Monitor performance of vehicle, its trailers and its equipment, and take appropriate action where required
- Read and interpret instructions, procedures, information and signs relevant to driving a heavy combination vehicle

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include:
- applying relevant procedures that reflect legislative requirements
- negotiating a range of complex traffic infrastructure (such as roundabouts, traffic lights, stalemate intersections, railway level crossings).

Context of and specific resources for assessment

Resources for assessment include access to:

- range of relevant exercises, case studies and/or other simulated practical and knowledge assessment
- appropriate range of relevant on-road operational situations or in the workplace
- relevant and appropriate materials and equipment
- applicable documentation such as workplace procedures, regulations, codes of practice and operation manuals.

Method of assessment

Practical driving aspects must be assessed in a vehicle typical of the class as approved by the state/territory driver licensing authority. The use of simulators for driver testing is not permitted.

The assessor must use the mandatory assessment tool provided by the state/territory driver licensing authority to conduct the assessment for this unit according to licensing authority requirements.

The state/territory driver licensing authority may prescribe approved routes, which must be used for the final assessment.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Heavy combination vehicle includes:

- Prime mover with a minimum of three axles and a semi-trailer with a minimum of two axles - vehicle must have a GCM rating of at least 24 tonnes
- Heavy rigid vehicle towing a trailer - trailer must have at least two axles and a GVM of 12 tonnes or more

Vehicle handling procedures may include:

- Accelerating and braking
- Managing engine performance
- Operating vehicle controls, instruments and indicators
- Positioning and stopping a vehicle

- Driving hazards may include:
- Reversing a vehicle
 - Starting a vehicle
 - Steering and manoeuvring a vehicle
 - Using defensive driving techniques
 - Animals and objects on road
 - Faulty:
 - brakes
 - steering mechanism on vehicle
 - Fire in vehicle
 - Flooded sections of road
 - Foggy conditions
 - Leaking fuel
 - Oil on road
 - Parked vehicles on road
 - Pedestrians crossing road
 - Wet and iced roads
 - Windy sections of road
- Traffic and road conditions may include:
- Negotiating a range of more complex traffic infrastructure (such as roundabouts, traffic lights, stalemate intersections, railway level crossings)
 - On open or private roads including roads with moderate inclines and declines
 - Operations conducted during the day or night
 - Typical weather conditions
 - While at a depot, base or warehouse
 - While at a client workplace or worksite
- Pre-operational inspections and equipment checks may include:
- Checking and topping up fluid levels
 - Checking:
 - brakes
 - operation of vehicle lights and indicators
 - tyre pressures
 - Visually checking vehicle

Unit Sector(s)

Not applicable.

Competency Field

LIC - Licensing

TLILIC3018B Licence to drive a multi combination vehicle

Modification History

New release. This unit replaces and is equivalent to TLILIC3018A.

Unit Descriptor

This unit involves the skills and knowledge required to obtain a licence to drive a multi-combination vehicle. It includes systematically and efficiently controlling all vehicle functions, monitoring traffic and road conditions, managing vehicle condition and performance, coupling and uncoupling of dollies, and effectively managing hazardous situations.

Assessment of this unit will be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory driver licensing authority.

Application of the Unit

This unit applies to driving that is carried out in compliance with the licence requirements and regulations of the relevant state/territory driver licensing authority pertaining to multi-combination vehicles.

Driving is performed with limited or minimum supervision, and with limited accountability and responsibility for self and others in achieving the prescribed outcomes.

Driving involves the application of routine vehicle driving principles and procedures to maintain safety and operate a multi-combination vehicle across a variety of driving contexts.

The primary legislative requirements applicable to this unit of competency are state/territory legislation in relation to road use and driver licensing.

This unit addresses the knowledge and skills necessary for the granting of a Multi-Combination Driver Licence.

Being awarded this unit of competency is a necessary requirement to obtain a Multi-Combination Driver Licence but is only one of several criteria. Prospective licence applicants should check with the state/territory driver licensing authority for other criteria (such as licence tenure and medical fitness) to confirm compliance with other eligibility requirements before undertaking training and/or assessment.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | |
|--|---|
| 1 Drive a multi-combination vehicle | <p>1.1 Multi-combination vehicle is started, steered, manoeuvred, positioned and stopped according to traffic regulations, manufacturer instructions and relevant vehicle handling procedures</p> <p>1.2 Engine power is managed to ensure efficiency and performance, and to minimise engine and transmission damage</p> <p>1.3 Braking system of multi-combination vehicle is managed and operated efficiently to ensure effective control of vehicle under all conditions</p> <p>1.4 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving</p> <p>1.5 Multi-combination vehicle is driven in reverse, maintaining visibility and achieving accurate positioning</p> <p>1.6 Multi-combination vehicle is parked, shutdown, uncoupled and safely secured according to traffic regulations</p> <p>1.7 Load is safely and effectively restrained</p> |
| 2 Monitor traffic and road conditions | <p>2.1 Traffic and road conditions are constantly monitored and acted upon to enable safe operation and to ensure no injury to people or damage to property, equipment, loads and facilities</p> <p>2.2 Interaction with other road users is conducted courteously according to road rules to ensure safe and efficient traffic flow</p> |
| 3 Monitor and maintain vehicle | <p>3.1 Vehicle performance is maintained through pre-operational inspections and vehicle checks</p> |

performance

- 3.2 Appropriate signage, lights and equipment are checked for operational effectiveness and for conformity to prescribed traffic regulations
- 3.3 Prime mover, dollies and trailer are correctly aligned and coupled in proper sequence
- 3.4 Coupled vehicle is checked and tested to ensure it is correctly secured and to confirm it is fully operational

Required Skills and Knowledge

This section describes the knowledge and skills required for this unit.

Required knowledge:

- Driving hazards and related defensive driving techniques
- Efficient driving techniques
- Engine power management and safe driving strategies
- Multi-combination vehicle controls, instruments and indicators and their use
- Multi-combination vehicle handling procedures
- Pre-operational checks carried out on vehicle and related action
- Relevant state/territory driver licensing authority road rules, regulations, permit and licence requirements

Required skills:

- Anticipate and monitor and traffic hazards and take appropriate action
- Apply precautions and required action to eliminate, minimise or control hazards that may exist when driving a multi-combination vehicle
- Carry out pre-operational vehicle checks
- Communicate effectively with others when driving a multi-combination vehicle
- Monitor performance of vehicle, its trailers and its equipment, and take appropriate action where required
- Read and interpret instructions, procedures, information and signs relevant to driving a multi-combination vehicle

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment

guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include:

- applying relevant procedures that reflect legislative requirements
- negotiating a range of complex traffic infrastructure (such as roundabouts, traffic lights, stalemate intersections, railway level crossings).

Context of and specific resources for assessment

Resources for assessment include access to:

- range of relevant exercises, case studies and/or other simulated practical and knowledge assessment
- appropriate range of relevant on-road operational situations or in the workplace
- relevant and appropriate materials and equipment
- applicable documentation such as workplace procedures, regulations, codes of practice and operation manuals.

Method of assessment

Practical driving aspects must be assessed in a vehicle typical of the class as approved by the state/territory driver licensing authority. The use of simulators for driver testing is not permitted.

The assessor must use the mandatory assessment tool provided by the state/territory driver licensing authority to conduct the assessment for this unit according to licensing authority requirements.

The state/territory driver licensing authority may prescribe approved routes, which must be used for the final assessment.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Multi-combination vehicle includes:

- Heavy combination B-double rated vehicle at least 22 metres in length with more than one trailer, which has all pertinent documentation permits etc.
- Three axle prime mover with an A and B trailer each with bogie axles

Vehicle handling procedures

- Accelerating and braking
- Managing engine performance

may include:

- Operating vehicle controls, instruments and indicators
- Positioning and stopping a vehicle
- Reversing a vehicle
- Starting a vehicle
- Steering and manoeuvring a vehicle
- Using defensive driving techniques

Driving hazards may include:

- Animals and objects on road
- Faulty:
 - brakes
 - steering mechanism on vehicle
- Fire in vehicle
- Flooded sections of road
- Foggy conditions
- Leaking fuel
- Oil on road
- Parked vehicles on road
- Pedestrians crossing road
- Wet and iced roads
- Windy sections of road

Traffic and road conditions may include:

- Negotiating a range of more complex traffic infrastructure (such as roundabouts, traffic lights, stalemate intersections, railway level crossings)
- On open or private roads including roads with moderate inclines and declines
- Operations conducted during the day or night
- Typical weather conditions
- While at a depot, base or warehouse
- While at a client workplace or worksite

Pre-operational inspections and equipment checks may include:

- Checking and topping up fluid levels
- Checking:
 - brakes
 - operation of vehicle lights and indicators
 - tyre pressures
- Visually checking vehicle

Unit Sector(s)

Not applicable.

Competency Field

LIC - Licensing

TLIR4002A Source goods/services and evaluate contractors

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to source goods/materials/services and evaluate contractors including analysing supply requirements, and evaluating and selecting appropriate potential contractor(s). Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work is performed under general guidance on progress and outcomes of work. It involves discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes within organisational policy and procedures. This includes the application of established workplace procedures to source goods and to evaluate potential contractors.

A range of opportunities may be used to develop the work area and to support the development of work systems and innovative strategies to deal with contingencies and to encourage the achievement of the organisations' goals and key performance objectives by the work area and the individuals and teams within it.

The unit generally applies to those with responsibility for resource coordination and allocation and who provide leadership of others individually or in teams.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Analyse supply requirements

- 1.1 Purpose and specifications of required goods/services are identified
- 1.2 Criteria to evaluate potential or existing contractor performance is established
- 1.3 Quantities of required goods/services are determined
- 1.4 Frequency of ordering/requesting of goods/services is identified

2 Evaluate potential contractors

- 2.1 Contractors of requested goods/materials/services are identified
- 2.2 Comparative costings for goods/materials/services are obtained
- 2.3 Contractors' ability to provide a consistent level of performance on repeat jobs is assessed
- 2.4 Contractors are evaluated in relation to established criteria and in accordance with workplace and regulatory procedures
- 2.5 A prioritised contractor shortlist is established based on the capacity of contractors to provide a cost competitive quality service
- 2.6 The outcomes of the contractor selection process are documented including recommendations for actioning agreements/contracts with selected contractors
- 2.7 Information and data generated during the selection process is filed and maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant regulatory and code requirements
- Relevant OH&S responsibilities and procedures
- Workplace policies, procedures and protocols for the sourcing and supply of goods/services, and the evaluation of potential supply contractors
- Workplace grievance and disputation handling policies and procedures
- Workplace business policies and plans as they relate to supply contracts, including procedures for maintenance of confidentiality
- Focus of operation of recording, reporting and statistical analysis systems and resources
- Resource availability including the processing capacity of equipment and software systems for statistical analysis of data
- Typical problems that can occur when sourcing goods and services and evaluating contractors, and related appropriate action that can be taken

Required skills:

- Communicate and negotiate effectively with others when sourcing goods and services and evaluating contractors
- Read and interpret instructions, procedures and information and signs relevant to the sourcing of goods and services and the evaluation of contractors
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the sourcing of goods and services and the evaluation of contractors
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when sourcing goods and services and evaluating contractors
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when sourcing goods and services and evaluating contractors in accordance with regulatory requirements and workplace procedures
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Select and appropriately apply technology, information systems and procedures to workplace

Required skills:

tasks

- Adapt to differences in equipment in accordance with standard operating procedures

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation,

EVIDENCE GUIDE

and/or

- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

The workplace environment may involve twenty-four hour operation and may include:

- single and multi-site location
- large, medium or small companies

Services, products, risks, work systems and requirements may:

- potentially vary across different sections of the workplace

Operations require:

- customer and supplier contact and coordination

Contractors may be:

- for one-off or repeat supplies/contract services

Document/data interchange may be:

- electronic
- paper-based

Selection processes include:

- procedures for maintenance of confidentiality and integrity

Personnel in work area may include

- other employees and supervisors
- customers and suppliers
- external authorities and agencies
- management and union representatives
- industrial relations, occupational health and safety specialists
- other professional or technical staff, contractors and maintenance personnel

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Information/documentation may include:

- quality and work specifications and procedures
- specifications for required products or services
- manufacturers specifications and/or suppliers handling and storage advice

RANGE STATEMENT

Applicable regulations and legislation may include:

- workplace procedures, policies and instructions
- OH&S regulations and procedures
- supplier and/or client instructions
- materials safety data sheets
- relevant agreements, codes of practice including the national standards for manual handling and the industry safety code
- legislation, regulations and related documentation, including regulations related to hazardous substances, dangerous goods and environment protection
- reports of accidents and incidents within regulatory requirements and enterprise procedures
- workplace guidelines on appropriate workplace language and communication strategies and interpretation of relevant information
- quality assurance procedures
- relevant regulations, standards and codes of practice
- relevant Australian and state/territory OH&S legislation
- equal employment legislation and related policies
- environmental protection regulations
- hazardous substances and dangerous goods codes
- relevant Australian standards and certification requirements
- licence, patent or copyright arrangements

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

R - Contract Procurement