



Australian Government

**Assessment Requirements for
FWPCOT3285 Apply knowledge of wood
technology principles to end use
applications**

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Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has:

- read and clarified work order to determine job requirements
- applied workplace health and safety requirements for assessing and selecting timber
- undertaken visual inspection of timber and identified defects
- evaluated timber characteristics, growth patterns, structure, durability and faults for suitability for end use applications and production purposes
- prepared timber for despatch
- recorded and reported on outcomes of timber selection.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- risks and hazards and mitigation measures associated with timber assessment and selection processes
- workplace procedures for assessing and selecting timber:
 - workplace health and safety, with particular emphasis on the use of personal protection equipment (PPE) and safe manual handling techniques
 - communication reporting lines
 - recording and reporting on outcomes of timber selection
- defects in timber and process for visually inspecting timber for defects:
 - contamination
 - timber colours
 - insect attack
 - surface finishes

- loose surfaces
- bubbles
- holes
- breakages
- machine-caused defects
- methods for assessing timber growth patterns, including make-up of a tree:
 - bark (cortex)
 - phloem
 - cambium layer
 - sapwood (xylem)
 - heartwood (truewood)
 - pith (medulla)
 - medullary rays
 - earlywood
 - latewood
 - growth rings
 - cellulose
 - hemicelluloses
 - lignin extractives
- methods of assessing timber for:
 - durability
 - strength
 - hardness
- rating for end use of timber, classification and measurement
- methods of assessing timber structures:
 - hardwood (pored wood) or softwood (non-pored wood)
 - vessels, fibres, ray cells, pits, tracheids
 - texture
- methods for seasoning timber
- timber characteristics:
 - colour
 - density
 - texture
 - grain
 - figure
 - qualities
 - end uses
- faults and features of timber:
 - bow
 - spring

- twist
- warp
- wane
- cupping
- shakes
- insect defects
- fungi
- knots
- resin pockets
- wild grain
- sloping grain
- working properties of timber and methods to measure properties:
 - timber shrinkage
 - effects of light
 - density and deterioration of the timber
 - compressive and tensile stresses
 - modulus of elasticity
 - modulus of rupture
 - deformation
 - creep
 - surface hardness
 - moisture content of timber
- sawing patterns and suitability for different timber:
 - live-sawn
 - back sawn
 - quarter sawn.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a timber processing or manufacturing facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools and equipment used to make timber selection
 - timber for selection and classification
 - PPE for assessing and selecting timber
- specifications:
 - documents, spreadsheets and commonly used template documents
 - manufacturer instructions for use, repair and maintenance of equipment

- work order with specific instructions for timber assessment and selection
- workplace procedures for timber selection.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>