

Title	Demonstrate knowledge of specifications for timber grading		
Level	3	Credits	15

Purpose	People credited with this unit standard are able to: identify and measure defects in timber; explain company grade specifications for timber grading; calculate the value of timber; and compare international timber grading standards to company grading specifications.
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Classification	Solid Wood Manufacturing > Timber Grading
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Available grade	Achieved
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Guidance Information

1 References

NZS 3631:1988 *New Zealand timber grading rules*, available at Standards New Zealand <https://shop.standards.govt.nz/search/ed>.

AS 2858-2008: *Timber – Softwood – Visually stress-graded for structural purposes*, Western Wood Products Association (WWPA): *Western Lumber Grading Rules* available at <http://www.wwpa.org>. This document is referred to below as ‘USA WWPA Rules’.

2 Definitions

Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider solid wood manufacturing industry as examples of best practice.

Company grade specifications are detailed instructions prescribing the exact dimensions and expected quality of product to meet customer requirements.

Workplace procedures refer to documented policies and procedures set by the organisation carrying out the work, and to documented or other directions provided to staff, and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor’s instructions, and procedures to comply with legislative and local body requirements relevant to the industry sector.

3 Assessment information

- a Competence for measuring defects may be demonstrated on workplace samples or samples supplied by the assessor.
- b All activities and evidence must meet workplace procedures and accepted industry practice.

- 4 Recommended unit standard for entry:
Unit 27074, *Demonstrate knowledge of timber grading.*
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Outcomes and performance criteria

Outcome 1

Identify and measure defects in timber.

Performance criteria

- 1.1 Defects in appearance grade timber are identified and measured in supplied samples.
- Range defects include but are not limited to – intergrown knot, partially inter-grown knots, tight encased knots, loose knots and holes, group knots, spike knot, wane, cup, bow, twist, crook, resin pockets, resin streaks, needle fleck, pith, bark pockets, knot checks, surface checks.
- 1.2 Defects in structural grade timber are measured in supplied samples.
- Range defects include but are not limited to – pith, through knots, group knots, spike knot, wane, cup, bow, twist, crook, resin pockets, bark pockets and checks.
- 1.3 Defects that do not require measurement are identified in supplied samples and required action for each defect is determined.
- Range defects include but are not limited to – skip, damage, decay, sapstain, splits, insect damage, brown stain, needle fleck, mould; required action may include but is not limited to – dock, re-grade, reject, re-work.
- 1.4 Defects in cuttings grade timber are measured in supplied samples.
- Range defects include but are not limited to - resin streaks, stain, surface checks, needle fleck, resin pockets, wane.
- 1.5 Cuttings grades are explained in terms of the yield specifications for each grade.

Outcome 2

Explain company grade specifications for timber grading.

Range minimum of six company grade specifications.

Performance criteria

- 2.1 Allowable defects for each company grade specification are explained.

- 2.2 Allowable moisture content for each company grade specification is explained.
- 2.3 Length requirements and tolerances for each company grade specification are explained.

Outcome 3

Calculate the value of timber.

Range evidence of three appearance or structural grades is required.

Performance criteria

- 3.1 The effect on value of timber lengths being docked to standard lengths is calculated, and the maximum financial value of the docked lengths is identified.

Range lengths are selected with regard to any of the following dependant on the requirements of the company's grade specifications – 2.4m, 3.6m, 4.2m, 4.8m, 5.4m, 6.0m.

- 3.2 Given the cost per lineal metre of a range of grades, the effect on value of timber lengths being re-sawn to upgrade is calculated to the nearest cent.

Outcome 4

Compare international timber grading standards to company grading specifications.

Performance criteria

- 4.1 An international grading standard that relates to one internal company grade specification is identified and compared in terms of their similarities.

Range international standards may include but are not limited to – NZS 3631, AS 2858, USA WWPA Rules.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	15 April 2011	31 December 2014
Revision	2	18 April 2013	N/A
Review	3	23 April 2020	N/A

Consent and Moderation Requirements (CMR) reference	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.