

Title	Explain and verify requirements for structural timber		
Level	2	Credits	10

Purpose	People credited with this unit standard are able to explain: the verification of structural timber and the wood properties and defects affecting verification; structural timber verification requirements; the verified structural timber grades; verification testing requirements and the branding and release requirements of verified structural timber products; and use testing equipment to verify timber grades.
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Classification	Solid Wood Manufacturing > Timber Grading
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Available grade	Achieved
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Guidance Information

- 1 Legislation and reference
Health and Safety at Work Act 2015.
Resource Management Act 1991.
NZS 3622:2004, *Verification of timber properties*, available at Standards New Zealand <https://shop.standards.govt.nz/search/ed>.
- 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.
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
All activities and evidence must meet workplace procedures and accepted industry practice.
- 4 Recommended unit standard for entry:
Unit 736, *Demonstrate knowledge of physical characteristics of wood*.

Outcomes and performance criteria

Outcome 1

Explain the verification of structural timber and the wood properties and defects affecting verification.

Performance criteria

- 1.1 The purpose and procedures used for verification of structural timber is explained in accordance with NZS 3622.
- 1.2 The properties and defects in wood that have a large effect on its stiffness and strength are identified and their impact is explained.

Outcome 2

Explain structural timber verification requirements.

Performance criteria

- 2.1 The species that can be verified for the New Zealand structural market under NZS 3622 are identified.
Range evidence of two species is required.
- 2.2 The production factors that can be controlled on a site to ensure verification requirements are met are explained.
Range evidence of four factors is required.
- 2.3 The parameters controlled under timber verification are identified.
Range evidence of three parameters is required.
- 2.4 Stiffness and strength in timber are defined.
- 2.5 The relationship between stiffness and moisture content is explained.

Outcome 3

Explain the verified structural timber grades.

Performance criteria

- 3.1 The verified structural timber grades in NZS 3622 are listed and the system for grading each is explained.
Range evidence of five grades is required.
- 3.2 The grades being produced at the candidate's site are identified and the uses these grades are put to are explained.

- 3.3 The visual grading rules (or over-ride rules for mechanically stress graded product) are identified for pith, wane, and knots in accordance with NZS 3622.

Outcome 4

Explain verification testing requirements and the branding and release requirements of verified structural timber products.

Performance criteria

- 4.1 The tests carried out during in-mill monitoring are identified and the procedures for each are explained.

Range bending strength, stiffness and moisture content.

- 4.2 The sampling frequency for selecting test pieces is explained in accordance with NZS 3622 and compared to the site's sampling frequency.

- 4.3 The term 'random selection' of test pieces is explained.

- 4.4 Branding requirements for New Zealand verified structural timber are identified in accordance with NZS 3622.

- 4.5 The requirements for releasing verified structural product are explained in accordance with NZS 3622.

Outcome 5

Use testing equipment to verify timber grades.

Performance criteria

- 5.1 Verification equipment is set up, checked, calibrated, and operated.

Range verification equipment may include but is not limited to – moisture meter, vernier callipers, test press, load cell.

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	25 January 2008	31 December 2014
Review	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.