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| <b>Title</b> | <b>Produce detailing solutions for the manufacture, and on-site assembly of pre-nailed timber structures</b> |                |           |
| <b>Level</b> | <b>5</b>   | <b>Credits</b> | <b>30</b> |

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| <b>Purpose</b> | <p>This unit standard is intended for those working in timber structure detailing.</p> <p>People credited with this standard are able to produce detailing solutions for the manufacture, and on-site assembly of pre-nailed timber structures to the level of performance required of a professionally competent detailer.</p> |
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| <b>Classification</b> | Construction Trades > Carpentry |
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| <b>Available grade</b> | Achieved |
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### Guidance Information

#### 1 Scope

The context of this unit standard is detailing in a manufacturing environment for the production of pre-nailed timber structures used for the construction of small buildings.

#### 2 Assessment

This unit standard is intended to align with the *New Zealand Diploma in Timber Structure Detailing – Specifications* and the *New Zealand Diploma in Timber Structure Detailing (Level 5)* [Ref: 4377].

Evidence for this standard must reflect professional competence.

Professional competence refers to the ability to work independently in order to meet the ethical and professional expectations of industry and clients on dynamic and varied projects operating in a commercial environment.

Professional competence must be confirmed by a person with current expertise in the timber structure detailing trade.

#### 3 Definitions

*Acceptable Solution* is a specific construction method that complies with the Building Code and applies Verification Methods; they often refer to Standards.

*Alternative Solution* is a part of the building that complies with the Building Code, but partially or completely differs from the Acceptable Solution or Verification Methods.

*Design lead* refers to the architect or draftsman responsible for the overall design of the building.

The *Legislative framework* refers to the hierarchy of Acts of Parliament, Regulations, Rules, local by-laws, Codes, Standards, approved codes of practice, and best practice guidelines.

*Non-standard design solution* is where Alternative Solutions are applied.

*Producer statements* is documentation that illustrate the design capacities and compliance with the New Zealand Building Code of pre-nailed timber structures using proprietary fixings and connectors.

*Proprietary design software* illustrates the design capacities and compliance with the New Zealand Building Code of pre-nailed timber structures using proprietary fixings and connectors.

*Small building* is of residential scale with lightweight timber-framing and/or concrete or concrete masonry construction, and generally of non-specific design.

*Standard design solution* is where Acceptable Solutions are applied.

*Verification Methods* are tests or calculation methods that prescribe one way to comply with the Building Code.

*Workplace procedures* refers to the documented procedures specific to a work site which set out the standard and required practices of that workplace.

- 4 Legislation, standards and guidance information relevant to this standard includes the following; and any subsequent amendments and replacements.

*New Zealand Diploma in Timber Structure Detailing – Specifications*, BCITO, August 2021, available from [www.waihanga.nz](http://www.waihanga.nz).

Legislation accessed at [www.legislation.govt.nz](http://www.legislation.govt.nz)

- Building Act 2004
- Construction Contracts Act 2002
- Health and Safety at Work Act 2015
- The New Zealand Building Code.

Standards accessed at [www.standards.govt.nz](http://www.standards.govt.nz)

- NZS 3602:2003 *Timber and wood-based products for use in buildings*
- NZS 3604:2011 *Timber Framed Buildings*.

Best practice and good practice guidelines

- *The Absolutely Essential Health and Safety Toolkit for Small Construction Sites*, and other Worksafe NZ publications available from [www.worksafe.govt.nz](http://www.worksafe.govt.nz).

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## Skill specification and performance level guidance

### Skill specification

Produce detailing solutions for the manufacture, and on-site assembly of pre-nailed timber structures.

### Knowledge

The impact of building methods on the design and detailing of pre-nailed timber structures.

The workplace processes to produce the required outputs for standard, and non-standard detailing solutions for pre-nailed timber structures.

The structural requirements to consider, and ways to accommodate these when developing design solutions for proposed buildings.

The requirements for materials used and material selection for the manufacture of pre-nailed timber structures.

The requirements for fixings and components for on-site assembly of pre-nailed timber structures, and methods to evaluate selection of products.

Range may include – fly rafter, outrigger, rafter, floor joist, floor truss, laminated veneer lumber (LVL) wood products, beam, rigid air barrier.

Methods to evaluate the economy of the detailing solution of pre-nailed timber elements.

Range economy includes minimising – materials required, manufacturing costs, material wastage.

The impact of site space and dimensions of pre-nailed timber structures on the movement and transportation of packages of pre-nailed structures to site.

The processes to determine costs of materials used in the manufacture and the on-site assembly of pre-nailed timber structures.

How to prepare, and present detailing solutions for clients, and the manufacturing team.

Range site drawings, cutting list, shop drawings, material and component list for on-site assembly, producer statement, and other documentation required by Design Leads and Building Consent Authorities.

## Skills

Develop standard, and non-standard detailing solutions for the manufacture, and on-site erection of pre-nailed timber structures.

Confirm the detailing solutions are illustrated correctly in the documentation prepared using the proprietary design software.

Analyse information from Design Leads and provide evidence to support detailing solutions.

Range standard solution, non-standard solution.

Provide detailed plans, and documentation to relevant parties.

Range relevant parties include – Design Lead, Building Consent Authority (BCA), client, contractor, manufacturing team.

Prepare specifications, including installation methods, for the on-site assembly of pre-nailed timber structures and components.

Prepare and provide details for packaging and transportation of pre-nailed timber structures to site.

Collate and evaluate costs to economise the materials used in pre-nailed timber structure designs.

Range economy includes minimising – materials required, manufacturing costs, material wastage.

### Performance level guidance

Performance must reflect the production of detailing solutions for relevant parties in the manufacture, transportation, and on-site placement and assembly of pre-nailed timber structures in accordance with legislative frameworks, workplace procedures, and specific proprietary design software.

Performance must reflect the use of proprietary design software to manage jobs – estimating, detailing, production, and delivery requirements.

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| <b>Planned review date</b> | 31 December 2026 |
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### Status information and last date for assessment for superseded versions

| Process      | Version | Date             | Last Date for Assessment |
|--------------|---------|------------------|--------------------------|
| Registration | 1       | 16 December 2021 | N/A                      |

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| <b>Consent and Moderation Requirements (CMR) reference</b> | 0048 |
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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 Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at [qualifications@waihanga.nz](mailto:qualifications@waihanga.nz) if you wish to suggest changes to the content of this unit standard.