

<b>Title</b>	<b>Demonstrate knowledge of construction factors affecting the design of prefabricated timber products for a small building</b>		
<b>Level</b>	<b>5</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	<p>This unit standard is intended for use in the training of frame and truss detailers.</p> <p>People credited with this unit standard are able to demonstrate knowledge of the influence of: the construction of foundations and substructure, the construction of timber framed buildings and associated supporting structural components, and construction of the envelope, on the design of prefabricated timber products for a small building.</p>
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<b>Classification</b>	Construction > Core Planning and Construction
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<b>Available grade</b>	Achieved
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### Explanatory notes

- 1 Definitions
 

*Design requirements* refer to requirements for sustainability, durability, appearance, maintenance, practicality for intended use, general cost implications and water/weathertightness.

*Small building* is a small scale, light weight building, generally of non-specific design, and of domestic scale with lightweight framing and/or concrete or concrete masonry construction.

*Timber framed building components* – any component within a building that is structural timber. This can include walls, trusses, beams, floor systems etc.
- 2 Assessment of this unit standard can be by simulation using given site information, and/or observation.
- 3 Legislation and publications relevant to this unit standard include:
 

Resource Management Act 1991;  
 Building Act 2004;  
 New Zealand Building Code;  
 NZS 3604:1999 *Timber Framed Buildings*, and NZS 4229:1999 *Concrete masonry buildings not requiring specific engineering design*, available from Standards New Zealand (<http://www.standards.co.nz>).

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## Outcomes and evidence requirements

### Outcome 1

Demonstrate knowledge of the influence of the construction of foundations and substructure on the design of prefabricated timber products for a small building.

#### Evidence requirements

- 1.1 The geotechnical factors that influence the design of prefabricated timber products including bracing, load path, and bearing capacity are explained.
- 1.2 The construction process for foundations and substructure is explained, including a description of the relationship and effect of site constraints, materials, and time and general cost implications on the process. The influence of these on the design of prefabricated timber products is explained.

Range materials – timber, concrete.

### Outcome 2

Demonstrate knowledge of the influence of the construction of timber framed buildings and associated supporting structural components on the design of prefabricated timber products for a small building.

#### Evidence requirements

- 2.1 The construction process for timber framed building structure is explained, including a description of the effect of code requirements, design requirements, structural requirements, product technical requirements, site constraints, materials, and time and general cost implications. The influence of these on the design of prefabricated timber products is explained.

Range materials – timber, in-situ reinforced concrete floor, concrete masonry blockwork, structural steel.

### Outcome 3

Demonstrate knowledge of the influence of the construction of the envelope on the design of prefabricated timber products for a small building.

#### Evidence requirements

- 3.1 Types of wall and roof claddings are explained in terms of their ability to meet different design requirements. The influence of these on the design of prefabricated timber products is explained.

Range materials, four of – timber, rendering, metal sheet, cellulose cement, masonry, concrete, glass.

- 3.2 Technical requirements of typical cladding jointing systems are described in terms of sealants, flashings, and compatibility and jointing between systems. The influence of these on the design of prefabricated timber products is explained.
- 3.3 The construction process for the building envelope is explained, including a description of the effect of structural requirements, site constraints, materials, and time and general cost implications. The influence of these on the design of prefabricated timber products is explained.

Range materials, four of – timber, rendering, metal sheet, cellulose cement, masonry, concrete, glass.

<b>Planned review date</b>	31 December 2017
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#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	15 January 2013	N/A

<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>.

#### Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

#### Comments on this unit standard

Please contact the Building and Construction Industry Training Organisation [national.office@bcito.org.nz](mailto:national.office@bcito.org.nz) if you wish to suggest changes to the content of this unit standard.