

<b>Title</b>	<b>Design, erect, and dismantle proprietary trusses</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>15</b>

<b>Purpose</b>	People credited with this unit standard are able to: <ul style="list-style-type: none"> <li>– use manufacturers information and scaffolding principles to design a proprietary truss system for bridging or roofs;</li> <li>– erect proprietary truss system for bridging or roofs;</li> <li>– check the structure is compliant and complete a GPG inspection report; and</li> <li>– dismantle proprietary trusses.</li> </ul>
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<b>Classification</b>	Lifting Equipment > Intermediate Scaffolding
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<b>Available grade</b>	Achieved
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<b>Prerequisite</b>	New Zealand Certificate in Scaffolding (Level 4) [Ref: 3710] or demonstrate equivalent knowledge and skills.
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### Guidance Information

- 1 This unit standard has been developed for learning and assessment on-job or off-job in a simulated environment. Where supervision is required by law, the supervisor must hold the appropriate Certificate of Competence for the scaffolding work undertaken.
- 2 All tasks are to be carried out in accordance with:
  - a quality management systems;
  - b designer requirements and manufacturer operating instructions; and legislation, regulations, bylaws, Health and Safety at Work Act 2015, and Health and Safety in Employment Regulations 1995;
  - c the most up to date version of the *Good Practice Guidelines - Scaffolding in New Zealand (GPG)*, 2016 available from <https://www.worksafe.govt.nz/topic-and-industry/working-at-height/scaffolding-in-new-zealand/>, and all subsequent amendments and replacements.
- 3 Definitions
 

*Proprietary truss systems* are manufactured trusses supplied with loading and bracing information supported by scaffolds or other supporting structure. May be used for bridging or as part of a proprietary roof system.

*Client* refers to an individual or representative of a company who commissions a particular scaffold or scaffolding structure to be erected, or is an end user of the scaffold or scaffolding structure.

*Scaffold plan* is a key design document prepared by the candidate and used as a basis for the erection of a particular scaffold.

*Scaffolding* is as defined in the GPG and in the Health and Safety in Employment Regulations 1995.

#### 4 Training and assessment

Competency for this unit standard must be demonstrated over a number of scaffolds sufficient to cover all the requirements of the range statement of outcomes 2, 3 and 4 – consistent with usual industry practice requirements. Competency may need to be demonstrated on a number of separate occasions for the same type to cover variations in componentry dimensions, complexity and interaction.

If work method includes the use of a fall arrest system a rescue plan must be established before work begins (PC 2.5) or if a fall arrest system is utilised, a rescue plan must be established before dismantling begins (PC 4.3).

#### 5 Range

Evidence is required for at least two proprietary truss systems constructed from existing scaffolds and or directly from a supporting structure. This unit standard is not intended for design or installation of structures requiring specific design by a Chartered Professional Engineer.

## Outcomes and performance criteria

### Outcome 1

Use manufacturers information and scaffolding principles to design proprietary truss system for bridging or roofs.

### Performance criteria

1.1 Confirm truss requirements with the client.

Range includes confirmation of dead load calculation, establishing maximum load, span between supports; may include but is not limited to – height, number of working lifts, span between supporting structure or scaffold, intended purpose or nature of work to be conducted from the trusses, timeframes.

1.2 Check the supporting structure or scaffold and attachments for capacity to support the trusses.

Range includes but is not limited to – confirmation of structural integrity, identification of attachment, tie, and bracing points.

1.3 Determine design requirements and draw scaffold plan for proprietary truss system.

Range includes but is not limited to – calculation of loads, distance, support requirements and attachments, regulatory requirements.

#### 1.4 Prepare design documents.

Range includes – scaffold plan, gear list; manufacturers information; may include but is not limited to –computer aided design printouts, work schedules, staffing allocation, WorkSafe New Zealand and local authority approvals, workplace-specific documentation.

### Outcome 2

Erect proprietary truss system for bridging or roofs.

#### Performance criteria

2.1 Confirm design parameters on-site before work begins in accordance with the scaffold plan.

Range includes but is not limited to – the span between the scaffolds or structures, number of working lifts supported, bracing and tie points, loads, and bracing.

2.2 Source the necessary equipment in accordance with the scaffold plan.

2.3 Position and attach trusses to the supporting scaffolds or structure in accordance with the scaffold plan.

2.4 Brace trusses.

2.5 Trusses are installed using a safe method of work.

Range may include but is not limited to – double lanyard tie off, type 2 or type 3 fall arrest or rope systems.

### Outcome 3

Check the structure is compliant and complete a GPG inspection report.

#### Performance criteria

3.1 Check the structure for compliance in accordance with the scaffold plan, manufacturers information and the GPG.

3.2 Complete a GPG inspection report.

3.3 Provide handover certificate to client, including duty loadings and any restrictions on the use of the scaffold.

### Outcome 4

Dismantle proprietary trusses.

**Performance criteria**

- 4.1 Clear trusses of loads from above.
- 4.2 Dismantle scaffolding components, and their bracing progressively back to the supporting scaffolds or structures.
- 4.3 Dismantle trusses using a safe system of work.

<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	24 February 2022	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0003
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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 the Waihanga Ara Rau Construction and Infrastructure Workforce Development Council [qualifications@waihanga.nz](mailto:qualifications@waihanga.nz) if you wish to suggest changes to the content of this unit standard.