41215 Design, erect, and dismantle proprietary trusses and spurred scaffolding

Kaupae | Level	4
Whiwhinga | Credit	18
Whāinga | Purpose	This skill standard is for people intending to complete qualifications and credentials in the scaffolding trades. People with this skill standard have the skills to design, erect and dismantle a proprietary truss system for bridging or roofs and spurred scaffolding and check the structure for compliance. This skill standard aligns with the New Zealand Certificate in Scaffolding (Intermediate) (Level 4) [Ref: 5660].
Whakaakoranga me mātua oti | Pre-requisites	New Zealand Certificate in Scaffolding (Elementary) (Level 4) [Ref: 5659] or demonstrate equivalent knowledge and skills.

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako | Learning outcomes	**Paearu aromatawai** | Assessment criteria
1. Design a proprietary truss system for bridging or roofs.	a. The truss requirements and loads are confirmed with the client in accordance with the Good Practice Guidelines for Scaffolding in NZ, manufacturer information and scaffolding principles.
	b. The capacity of the truss system, supporting structure and scaffold, and the attachments to support the trusses are checked in accordance with the Good Practice Guidelines for Scaffolding in NZ, manufacturer information and scaffolding principles.
	c. The design requirements are determined, and a scaffold plan is drawn to scale in accordance with the Good Practice Guidelines for Scaffolding in NZ, manufacturer information and scaffolding principles.
	d. The design documents and rescue plan are prepared in accordance with the scaffold plan, Good Practice Guidelines for Scaffolding in NZ and manufacturer information.

Hua o te ako | Learning outcomes	**Paearu aromatawai** | Assessment criteria
2. Erect proprietary truss system for bridging or roofs.	a. The necessary equipment is sourced in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	b. The trusses are positioned and attached to the supporting scaffolds using a safe method of work in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	c. The trusses are braced using a safe method of work in accordance with the scaffold plan, manufacturers information and the Good Practice Guidelines for Scaffolding in NZ.
3. Inspect and dismantle the proprietary truss system for bridging or roofs.	a. The structure is checked for compliance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	b. The inspection report is completed in accordance with the Good Practice Guidelines for Scaffolding in NZ and industry standards.
	c. Changes are made where structure is not compliant to the Good Practice Guidelines for Scaffolding in NZ and industry standards and the inspection report is amended accordingly.
	d. The proprietary truss system is dismantled in sequence using a safe work method in accordance with the Good Practice Guidelines for Scaffolding in NZ, industry standards and worksite requirements.

Hua o te ako | Learning outcomes	**Paearu aromatawai** | Assessment criteria
4. Plan and prepare for erection of spurred scaffolding.	a. The site conditions are assessed to determine suitability for spurred scaffold installation, and the scaffold plan is drawn to scale in accordance with the Good Practice Guidelines for Scaffolding in NZ.
	b. The loads and load paths imposed on scaffold components such as standards, ledgers, transoms, spur tubes and couplers are calculated based on the design and duty loads in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	c. Spur tubes are designed to be positioned at optimum configurations to transfer loads to the supporting scaffold structure in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	d. Connections are designed to use appropriate couplers in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	e. Bracing and ties are designed in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
5. Erect spurred scaffolding.	a. The spurred scaffold is erected progressively and safely in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	b. The spur supports are installed using a safe work method in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	c. Platforms, edge protection and access are installed using safe work methods in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	d. The scaffold is tied to the supporting structure or otherwise stabilised to prevent overturning or collapse in accordance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.

Hua o te ako | Learning outcomes	**Paearu aromatawai** | Assessment criteria
6. Inspect and dismantle spurred scaffolding.	a. The structure is checked for compliance with the scaffold plan and the Good Practice Guidelines for Scaffolding in NZ.
	b. The inspection report is completed in accordance with the Good Practice Guidelines for Scaffolding in NZ and industry standards.
	c. Changes are made where structure is not compliant to the Good Practice Guidelines for Scaffolding in NZ and industry standards and the inspection report is amended accordingly.
	d. The spurred scaffold is dismantled in sequence in accordance with the Good Practice Guidelines for Scaffolding in NZ, industry standards and worksite requirements.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

The candidate must be capable of calculating the dead and live loads on the truss system or spurred scaffold and the additional loads on the supporting scaffold and identifying the load paths.

The candidate must be capable of designing, erecting and dismantling proprietary truss systems and spurred scaffolding to the standards expected of a commercially competent scaffolder.

This skill 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.

Evidence is required for at least two proprietary truss systems supported from scaffolds and two spurred scaffold installations. This skill standard is not intended for design or installation of structures requiring specific design by a Chartered Professional Engineer.

Evidence must demonstrate competency covering 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 any scaffold work begins.

Candidates may carry out practical scaffolding activities as part of a team. However, assessment must confirm that each candidate has independently demonstrated competence in all aspects of the required assessment criteria. Evidence must confirm that the candidate has actively and independently applied the relevant skills, knowledge, and safety behaviors across the full scope of the standard, including compliance with regulatory and site-specific requirements.

Commercial competence requires a candidate to be capable of consistently performing the requirements:

- to current regulatory, industry and commercial standards
- within a commercially viable timeframe
- in commercial environments
- with limited supervision
- in different and unfamiliar contexts.

Definitions

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.

Good Practice Guidelines for Scaffolding in NZ contain specific requirements for scaffolds. For proprietary scaffolds the guidelines require use of manufacturer's specifications.

Proprietary trusses are manufactured trusses supplied with loading and bracing information supported by scaffolds or other supporting structure. May be used for bridging, cantilevers or as part of a proprietary roof system. The candidate must be able to explain when a truss is in compression or tension under load and the associated bracing requirements.

Scaffold plan is a key design document prepared by the candidate and used as a basis for the erection of a particular scaffold. For this skill standard, it must be prepared by the candidate.

Scaffolding is as defined in the latest versions of the Good Practice Guidelines for Scaffolding in NZ and the Health and Safety in Employment Regulations 1995.

Spurred scaffolding involves an area of scaffold cantilevered from the scaffold and supported by angled braces or spur tubes that transfer loads through the scaffold to the ground or supporting structure. It is used to provide vertical support to a portion of scaffold that cannot be directly supported from the ground or supporting structure. The candidate must be able to use spurs and trusses in tension and compression and explain the requirements of each.

Ngā momo whiwhinga | Grades available

Achieved

Ihirangi waitohu | Indicative content

Technical skills and knowledge

- Interpreting project instructions on agreed work to be carried out.
- Quality management systems.
- Regulatory, industry, the Good Practice Guidelines for Scaffolding in NZ and manufacturer operating instructions include engineer's recommendations.
- Truss requirements – calculation of imposed loads and span, using manufacturers information to establish the truss and bracing requirements and maximum working load limit (WLL).
- The supporting structure check – confirmation of the load imposed from the truss system, structural integrity, identification of attachment, tie, and bracing points.
- Design requirements for proprietary truss system – calculation of loads and load paths, distance, support requirements and attachments, regulatory requirements, safe erection and dismantle procedures.
- Design documents – the scaffold plan, gear list; manufacturers information, aided design printouts, work schedules, staffing allocation, WorkSafe New Zealand and local authority approvals, workplace-specific documentation.
- Spurred scaffold installation plan – spur angles, load paths and support surfaces.
- Hazards, risk assessment and controls associated with spur and truss installation.
- Sequence in dismantling.
- Methods to maintain clean and tidy sites.
- Safe loading and unloading of tools, equipment, and product.
- Manufacturer's product data specifications.

Communication, literacy and numeracy

- Relevant documentation.
- Workplace communication.
- Interpersonal skills.
- Measurement and calculation.

Rauemi | Resources

Legislation available at http://legislation.govt.nz

- Health and Safety at Work Act 2015;
- 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.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa | Standard Setting Body	Construction and Specialist Trades Industry Skills Board
Whakaritenga Rārangi Paetae Aromatawai | DASS classification	Service Sector > Lifting Equipment > Intermediate Scaffolding
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga | CMR	0120

Hātepe | Process	**Putanga** | Version	**Rā whakaputa** | Review Date	**Rā whakamutunga mō te aromatawai** | Last date for assessment
Rēhitatanga | Registration	1	30 July 2026	N/A
Kōrero whakakapinga | Replacement information	This skill standard replaced unit standards 26606 and 32877.		
Rā arotake | Planned review date	31 December 2031		

Please contact the Construction and Specialist Trades Industry Skills Board at info@cstisb.nz if you wish to suggest changes to the content of this skill standard.