

Formwork 2 Construct and dismantle formwork of moderate complexity for concrete structures

Kaupae Level	4
Whiwhinga Credit	10
Whāinga Purpose	This skill standard is for people working in or entering the concrete construction trade. People credited with this skill standard have the skills to construct and dismantle formwork of moderate complexity for concrete structures. This skill standard aligns with the New Zealand Certificate in Concrete Construction (Commercial and Civil Infrastructure) (Level 4) [Ref XXXX] and may also contribute to other construction and infrastructure qualifications.

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Construct and check formwork for concrete structures	a. Formwork is fixed securely and constructed in accordance with plans and specifications.
	b. Temporary supports are positioned and adjusted safely to maintain formwork stability and alignment.
	c. Connections and fixings are tightened and secured to withstand concrete pressure and height.
	d. Cast-in components and joints are positioned and secured in accordance with plans and specifications.
	e. Formwork is checked and confirmed for stability, support, and correct alignment before concrete placement.
2. Complete and coordinate the dismantling of formwork, falsework and propping systems.	a. Stripping times are confirmed in accordance with concrete curing and strength requirements and industry standards.
	b. Dismantling is carried out safely and without damaging the finished concrete surface.
	c. Materials and components are cleaned, stored ready for reuse in accordance with industry standards.

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

To achieve this standard, the candidate must construct and dismantle formwork of moderate complexity for concrete structures, to industry standards.

Examples may include in-situ, modular, table, custom or permanent formwork systems that use falsework or propping.

Industry standards must reflect industry best practice, workplace procedures, and be within acceptable tolerances as defined in New Zealand codes, standards and regulations.

Plans and specifications can include working drawings, plan specifications, manufacturer specifications, installation instructions and demolition and project plans.

Moderate complexity refers to formwork construction involving a range of tasks and varied site conditions. Work may include falsework, propping systems or other temporary supports for concrete elements such as slabs, beams, columns, or walls, where there may be increased height requirements, multiple pours, curved, angled or stepped formwork, or additional load considerations from concrete pressure, curing or sequencing.

Evidence for this standard must be demonstrated:

- to current and relevant Legislation, Standards, and Codes (including safety),
- in an environmentally sustainable manner,
- within an acceptable timeframe,
- with acceptable behaviours.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content**Planning and site preparation**

- Plans and specifications
- Site layout, access and safety zones
- Equipment, tools and materials
- Environmental and safety considerations

Formwork and temporary systems

- Design responsibility
- System types and components (e.g. modular, in-situ, table, slip, custom, permanent propping)
- Propping, shoring, and bracing methods
- Load distribution and stability
- Connections, ties and fittings
- Understanding how concrete pressure affects formwork during placement and how height and pour rate increase pressure at the base.
- The role of fixings, bolts and ties in maintaining formwork

Construction and assembly

- Setting out and alignment
- Fixing, joining, and adjustment techniques
- Positioning of cast-in components and joints
- Inspection and tolerance checks

Loading and stability

- Load factors during erection, concrete placing, and curing
- Support requirements and sequencing
- Monitoring for movement or deflection during concrete pour

Dismantling and material management

- Curing and stripping times
- Safe dismantling sequence
- Cleaning, storing, and reusing materials and components
- Protection and maintenance of equipment

Industry standards

Rauemi | Resources

Programme Guidance information available from qualifications@waihangaararau.nz.

Pārongo Whakaū Kouna | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Waihanga Ara Rau Construction and Infrastructure Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Concrete > Concrete Construction
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	dd mm 2025	N/A
Kōrero whakakapinga Replacement information	N/A		
Rā arotake Planned review date	[dd mm yyyy]		

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz to suggest changes to the content of this skill standard.