

## Formwork 1      Construct and dismantle formwork of standard complexity for concrete structures

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Kaupae   Level</b>     | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Whiwhinga   Credit</b> | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Whāinga   Purpose</b>  | <p>This skill standard is intended for people working in or entering the construction trades.</p> <p>People credited with this skill standard have the skills to construct and dismantle formwork for concrete structures under limited supervision.</p> <p>This skill standard aligns with the New Zealand Certificate in Concrete Construction Skills (Level 3) [Ref: XXXX] and may also contribute to other construction and infrastructure qualifications.</p> |

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

| <b>Hua o te ako   Learning outcomes</b>                                 | <b>Paearu aromatawai   Assessment criteria</b>                                                                         |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 1. Identify materials, components, and agents used in formwork systems. | a. Formwork materials are identified in terms of type and purpose.                                                     |
|                                                                         | b. Cast-in components are identified and explained in terms of function as part of the formwork system.                |
|                                                                         | c. Release and cleaning agents are identified in terms of purpose and application.                                     |
| 2. Construct formwork for concrete structures.                          | a. Formwork systems are assembled using appropriate methods to meet the plans and specifications.                      |
|                                                                         | b. Pre-made or fabricated components are fit to meet the formwork design and requirements.                             |
|                                                                         | c. Formwork is constructed to meet the dimensions, shape and alignment of the concrete structure.                      |
| 3. Dismantle formwork for concrete structures.                          | a. Formwork systems are dismantled safely and without damaging the finished concrete surface.                          |
|                                                                         | b. Materials and components are recovered, cleaned and prepared for reuse or disposal in line with industry standards. |

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

To achieve this standard the candidate must be capable of carrying out construction tasks for the completion of formwork of standard complexity for concrete structures under limited supervision to industry standards.

*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.

*Under limited supervision* refers to candidates carrying out the requirements of this skill standard with basic guidance and indirect supervision from a suitably skilled tradesperson. They are expected to source some information independently from plans, specifications, or relevant New Zealand Standards and apply these to routine or familiar projects.

Concrete structures may include a range of building and civil construction works such as slabs, walls, beams, columns, foundations, footpaths, retaining structures, or other concrete elements.

Standard complexity refers to formwork that use familiar materials, tools and techniques for straightforward concrete structures such as slabs, beams, columns, and walls. Work is completed within clearly defined parameters and tolerances using standard systems.

Evidence for this standard must be demonstrated:

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

***Ngā momo whiwhinga | Grades available***

Achieved.

**Ihirangi waitohu | Indicative content**

- Plans and specifications
- Formwork systems (modular, table, jump/climb, slipform, in-situ/custom, in-ground)
- Formwork materials (e.g. timber, plywood, steel, aluminium, plastic/composite panels)
- Fabrication and assembly
- Pre-made and fabricated components (panels, shutters, bracing, walers, bearers, supports)
- Cast-in components (reinforcing chairs, brackets, ties, ducts, conduits, penetrations, anchor bolts, pipes)
- Formwork detailing for shape, dimensions and alignment
- Concrete joints (free movement and tied)
- Release and cleaning agents.

**Rauemi | Resources**

Programme Guidance information available from [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz).

**Pārongo Whakaū Kounga | Quality assurance information**

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|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Ngā rōpū whakatau-paerewa  </b><br>Standard Setting Body                                | Waihanga Ara Rau Construction and Infrastructure Workforce Development Council |
| <b>Whakaritenga Rārangi Paetae Aromatawai  </b><br>DASS classification                     | Concrete > Concrete Construction                                               |
| <b>Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga  </b><br>CMR | 0120                                                                           |

| <b>Hātepe  </b> Process                                 | <b>Putanga  </b><br>Version                                  | <b>Rā whakaputa  </b><br>Review Date | <b>Rā whakamutunga mō te aromatawai  </b><br>Last date for assessment |
|---------------------------------------------------------|--------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------|
| <b>Rēhitatanga  </b> Registration                       | 1                                                            | dd mm 2025                           | N/A                                                                   |
| <b>Kōrero whakakapinga  </b><br>Replacement information | This skill standard replaced unit standards 32661 and 32663. |                                      |                                                                       |
| <b>Rā arotake  </b><br>Planned review date              | [dd mm yyyy]                                                 |                                      |                                                                       |

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