

41142 Prepare a base of moderate complexity for in-situ concrete construction

Kaupae Level	4
Whiwhinga Credit	7
Whāinga Purpose	<p>This skill standard is for people working in or entering the concrete construction trade.</p> <p>People credited with this skill standard have the skills to prepare a base of moderate complexity for in-situ concrete construction.</p> <p>This skill standard aligns with the New Zealand Certificate in Concrete Construction (Building and Infrastructure) (Level 4) [Ref: 4188] and may also contribute to other construction and infrastructure qualifications.</p>

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Identify excavation requirements for planning in-situ concrete construction.	a. Excavation requirements are identified from plans and specifications, including dimensions, depths, and tolerances.
	b. Factors affecting excavation for concrete work, such as soil type, drainage and access are identified in accordance with industry standards.
	c. Common safety and environmental controls used during excavation are identified.
2. Prepare a base of moderate complexity for in-situ concrete construction.	a. Base levels and lines are confirmed against plans and specifications.
	b. Barrier systems, where required, are checked installed or protected in accordance with plans and specifications.

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

Assessment specifications:

To achieve this standard, the candidate must be able to complete preparing a base of moderate complexity for in-situ concrete construction 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.

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.

Definitions:

Acceptable behaviours refer to professional behaviours expected in a construction environment. This includes working safely with others, communicating effectively, following workplace procedures, respecting people, tools, equipment, and materials, and responding appropriately to hazards and changing work conditions.

Moderate complexity refers to base preparation work involving a broad range of tasks and varied site conditions. Work includes confirming levels and lines, checking site conditions and protecting or maintaining barrier systems where required, for concrete elements, for example, slabs, beams, columns, walls, or foundations, where there may be changing site conditions, multiple reference points or coordination with other trades.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

Planning and site preparation

- Plans and specifications.
- Site boundaries, existing structures, features, and services.
- Site access, traffic management, and delivery zones.
- Environmental and cultural considerations.

Excavation methods and types

- Open excavations, trenches, pits, and temporary retaining structures.
- Manual and mechanical excavation techniques.
- Site stability, slopes, and benching principles.
- Excavation for slabs, footings, and retaining bases.

Ground safety and hazard control

- Underground services (e.g. cables, pipes, drains).
- Access and egress for excavations.
- Techniques for collapse and fall prevention (e.g. shoring, battering, barriers).
- Weather and groundwater conditions.

Handling of materials and spoil

- Excavated material types and characteristics (e.g. soil, clay, rock, rubble).
- Spoil handling and storage.
- Reuse, compaction, or removal.
- Environmental protection and sediment control.

Base materials and preparation

- Sub-base and base material properties.
- Compaction and testing methods.
- Levels, lines, and falls.
- Surface finishing and tolerances.

Moisture and barrier systems

- Damp-proof membranes and moisture barriers.
- Barrier material types (e.g. polythene, emulsion, self-adhesive systems).
- Protection of installed systems.

Quality and verification

- Excavation and base dimensions.
- Tolerances and documentation.
- Readiness for concrete works.

Industry standards

Rauemi | Resources

Programme Guidance information available from info@cstisb.nz.

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	Planning and Construction > 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	26 February 2026	N/A
Kōrero whakakapinga Replacement information	This skill standard replaced unit standard 32589.		
Rā arotake Planned review date	31 December 2030		

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