

## CP2 Boom      Operate concrete pump machinery and equipment for a boom delivery system

<b>Kaupae   Level</b>	4
<b>Whiwhinga   Credit</b>	10
<b>Whāinga   Purpose</b>	<p>This skill standard is for people who operate concrete pump machinery for boom delivery systems.</p> <p>It is for learners with experience in concrete pumping who want to prepare to work as a commercially competent concrete pump operator for a boom delivery system.</p> <p>This skill standard is intended to be used in the New Zealand Certificate in Concrete (Specialist) L4 Concrete Pump Operation (Boom Delivery System) strand.</p>

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

Hua o te ako   Learning outcomes	Paearu aromatawai   Assessment criteria
1. Confirm on-site set up location for concrete pump machinery and equipment for boom delivery system	a. Construction site principal consultation completed according to guidelines.
	b. Safe and efficient machinery location identified
2. Position and stabilise concrete pump machinery and delivery system	a. Concrete pump machinery and boom positioned for safe and efficient delivery
	b. Concrete pump machinery stabilised for safe boom operation and concrete delivery
3. Complete a safe on-site concrete pump operation with a boom delivery system	a. Pumping operation completed according to plan
	b. Concrete pumping operation completed safely

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

Assessment specifications:

Learners will safely undertake a concrete pumping operation for a boom delivery system to the standard of a competent Concrete Pump Operator.

Performance must reflect industry best practice.

Concrete pump machinery includes pump, hopper, and boom delivery system.

A boom delivery system may include hose, pipeline, bends, boom, clamps, reducers, safety pins.

Concrete Pumping Operation does not include driver licensing requirements.

**Ngā momo whiwhinga | Grades available**

Achieved

**Ihirangi waitohu | Indicative content****Safety**

Hazard and risk management  
 Safe boom movement practices  
 Safety radius around pump, workers and public  
 Safe operating distances - between concrete pump machinery and on-site equipment and machinery, and concrete pump machinery and overhead hazards and powerlines

Hose hand responsibilities, instructions, communication, and safety hand signals  
 On-site communication during operation  
 Document requirements

**Machinery positioning, stabilisation and operation**

Assessment of ground conditions  
 Use of stabilisers, levelling, and operating tolerances  
 Setting up boom to line transitions  
 Knowledge of pump machinery operating limits  
 Operating procedures including pre-start checks and shut down

Knowledge of concrete properties - MPA and slump, use of retardants, composition, admixtures, and life span  
 Effects of steel fibre constituent on concrete pumping  
 Working with compressed air  
 Risks and effects of air in delivery pipe  
 Techniques for preventing backpressure build up

**Trouble shooting**

blockages, breakdowns, un-pumpable concrete mixes, hydraulic hose blowout or leak, releasing pressure off delivery system

Emergency procedures during pumping

**On-site environmental considerations**

slurry control, waterway protection and spill kit procedures

**Rauemi | Resources**

- Concrete Pumping Health and Safety Guidelines February 2013 Copyright © Concrete Pumping Association of New Zealand.
- WorkSafe NZ
- Programme guidance available from [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz)

**Pārongo Whakaū Kounga | Quality assurance information**

<b>Ngā rōpū whakatau-paerewa  </b> Standard Setting Body	Waihanga Ara Rau Construction and Infrastructure Workforce Development Council.
<b>Whakaritenga Rārangi Paetae Aromatawai  </b> DASS classification	Planning and Construction > Concrete > Concrete Construction

<b>Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga   CMR</b>	0048
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<b>Hātepe   Process</b>	<b>Putanga   Version</b>	<b>Rā whakaputa   Review Date</b>	<b>Rā whakamutunga mō te aromatawai   Last date for assessment</b>
<b>Rēhitatanga   Registration</b>	1	[dd mm yyyy]	[dd mm yyyy]
<b>Arotakenga   Review</b>	<type here>	[dd mm yyyy]	[dd mm yyyy]
<b>Kōrero whakakapinga   Replacement information</b>	<type here>		
<b>Rā arotake   Planned review date</b>	1 October 2028		

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.