

<b>Title</b>	<b>Demonstrate knowledge of materials and components used in concrete prestressing operations</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>7</b>

<b>Purpose</b>	<p>This unit standard is intended for people working in the construction industry.</p> <p>People credited with this standard can demonstrate knowledge of materials and components used in concrete prestressing operations to the level of performance required of a commercially competent tradesperson.</p>
----------------	--

<b>Classification</b>	Concrete > Precast Concrete
-----------------------	-----------------------------

<b>Available grade</b>	Achieved
------------------------	----------

---

## Guidance Information

### 1 Assessment

This unit standard is intended to align with the *New Zealand Certificate in Concrete (Specialist) – Specifications* and the *New Zealand Certificate in Concrete (Specialist) (Level 4)* [Ref: 4186].

Evidence for this unit standard must reflect commercial competence.

Commercial competence refers to the ability to demonstrate knowledge and skills in the context of the currently accepted requirements of a business operating in a commercial environment.

Commercial competence must be confirmed by a person with current expertise in concrete prestressing operations.

Prestressing operations may occur in a precast concrete manufacturing environment and in-situ concrete construction.

### 2 Definitions

*Concrete prestressing operations* refers to the processes for bonding pre-tensioned high tensile steel bars or wires into a concrete structure resulting in the transfer of strength of the steel into the concrete once hardened.

*Workplace procedures* refers to the documented procedures specific to a workplace that set out the standards and required practices of that workplace.

- 3 Legislation, standards and guidance information relevant to this standard includes the following, and any subsequent amendments and replacements:

Specifications available from [qualifications@waihanga.nz](mailto:qualifications@waihanga.nz)

- *New Zealand Certificate in Concrete (Specialist) – Specifications*, BCITO, October 2020.

*New Zealand Guide to Concrete Construction 2011* (Revised Edition) accessed at [www.concretenz.org.nz](http://www.concretenz.org.nz).

---

## Skill specification and performance level guidance

### Skill specification

Demonstrate knowledge of materials and components used in concrete prestressing operations.

### Knowledge

The types, properties and purposes of stressing materials used in prestressing operations.

Range stressing materials include – tendons, wire, ducts, strands and bars.

The range and purpose of temporary components used in prestressing operations.

Range includes anchorages and wedges.

Processes for handling and checking materials and components used in concrete prestressing operations.

### Performance level guidance

Performance must reflect workplace procedures, current regulatory, industry and commercial standards relevant to concrete prestressing operations.

<b>Planned review date</b>	31 December 2026
----------------------------	------------------

### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 January 2022	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0048
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

---

**Comments on this unit standard**

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