

Title	Demonstrate knowledge of the impacts of hardened concrete on concrete sawing and drilling		
Level	4	Credits	4

Purpose	<p>This unit standard is intended for people working in the construction industry.</p> <p>People credited with this standard can demonstrate knowledge of the impacts of hardened concrete on concrete sawing and drilling to the level of performance required of a commercially competent tradesperson.</p>
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Classification	Concrete > Concrete Construction
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Available grade	Achieved
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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 sawing and drilling.

2 Definitions

Concrete sawing and drilling refers to deep floor sawing, track mounted wall sawing and wire sawing, large core and deep drilling of concrete structures on-site.

Concrete structures refer to unreinforced and reinforced concrete, structural concrete elements (precast, pre-stressed and post-tensioned), slabs, columns and beams and concrete masonry.

- 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

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

Legislation accessed at www.legislation.govt.nz

- Building Act 2004
- Resource Management Act 1991
- Health and Safety at Work (General Risk and Workplace Management) Regulations 2016.

Standards accessed at www.standards.govt.nz

- NZS 3101.1&2:2006 *Concrete structures*
- NZS 3109:1997 *Concrete construction*.

Guidelines and Approved Codes of Practice accessed at www.worksafe.govt.nz

- *Approved Code of Practice for Load-lifting Rigging*
- *Practical Guide for Working Safely With Hazardous Substances*
- *The Absolutely Essential Health and Safety Toolkit*.

Skill specification and performance level guidance

Skill specification

Demonstrate knowledge of the impacts of hardened concrete on concrete sawing and drilling.

Knowledge

The physical properties of hardened concrete.

Range strength and durability.

How friction, wear and environmental factors affect the physical properties of hardened concrete.

Range environmental factors include – temperature, wind, seismic and climatic forces.

The range of materials that may be present in hardened concrete and their impact on sawing and drilling operations.

Range materials include – reinforcing, cast-ins elements, cables and ducting, stressing strands, and services (electrical, water, gas, data, services for fire protection systems).

The impacts of concrete dust on human health and the environment.

The methods and equipment used to protect human health and the environment from the impacts of concrete dust.

Performance level guidance

Performance must reflect current regulatory, industry and commercial standards relevant to concrete construction.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

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

Consent and Moderation Requirements (CMR) reference	0048
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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 if you wish to suggest changes to the content of this unit standard.