

Title	Demonstrate knowledge of concrete batching in a concrete production plant		
Level	4	Credits	15

Purpose	<p>This unit standard is intended for people working in the concrete production industry.</p> <p>People credited with this unit standard are able to demonstrate knowledge of concrete batching to the level of performance required of a commercially competent concrete production batching operator.</p>
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Classification	Concrete > Concrete Production
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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 Production – Specifications* and the *New Zealand Certificate in Concrete Production (Level 4)* [Ref: 4187].

Evidence for this 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 production.

2 Definitions

The *Plant Audit Scheme* sets out the operating regulations and practices for each production plant, so accreditation requirements are met with the Concrete NZ Readymix Sector Group.

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:

New Zealand Certificate in Concrete Production – Specifications, BCITO, October 2020 available from www.bcito.org.nz.

Legislation accessed at www.legislation.govt.nz

- Building Act 2004
- Hazardous Substances and New Organisms Act 1996
- Health and Safety at Work Act 2015
- The New Zealand Building Code
- Land Transport Act 1998.

Standards accessed at www.standards.govt.nz

- NZS 3104:2003 *Specification for concrete production*.

Guidelines and Approved Codes of Practice

- *A Guide to Concrete Construction* available from www.concretenz.org.nz
- *The Plant Audit Scheme* available from www.concretenz.org.nz.

Skill specification and performance level guidance

Skill specification

Demonstrate knowledge of concrete batching in a concrete production plant.

Knowledge

The compliance responsibilities of a batching operator to meet plant audit requirements.

The information required to batch concrete according to a specified mix design.

Range information includes production register, material supplies.

The batching and mixing sequence to produce concrete in a production plant.

The processes and requirements for testing free moisture content of materials used in concrete production.

How to adjust weights and volumes of constituents to meet concrete mix design.

The storage requirements to maintain usability of aggregate products.

How to recognise from visual checks that aggregates are out of tolerance and the required remedial action.

Range remedial actions include weighing and sieving.

How varying the constituents of concrete outside of tolerance can adversely affect the performance of concrete.

Range includes adding water, aggregate, admixtures, and admixtures.

How mixing times for fresh concrete in transit impact on the performance of concrete once it has been placed and cured.

The procedure for checking a batched concrete mix is within tolerance and how to balance or correct it.

Range checking includes visual assessment.
correction includes – wet, dry.

The rules and procedures for reuse of returned concrete.

Performance level guidance

Performance must reflect plant audit scheme requirements, NZS 3104, and workplace procedures.

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	24 June 2021	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 the Building and Construction Industry Training Organisation national.office@bcito.org.nz if you wish to suggest changes to the content of this unit standard.