

Title	Arrange for laboratory testing of crushed stone and rock aggregates		
Level	4	Credits	15

Purpose	People credited with this unit standard are able to: procure material samples of crushed stone and rock aggregates for testing; arrange for material testing to be carried out; and collate testing records and review results, for crushed stone and rock aggregates.
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Classification	Extractive Industries > Surface Extraction
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Available grade	Achieved
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Guidance Information

- 1 Performance of the outcomes of this unit standard must comply with the following:
Health and Safety at Work Act 2015 (HSW);
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016;
Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations 2016;
Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016;
approved codes of practice issued pursuant to the HSW Act;
Resource Management Act 1991;
NZS 4407:2015 *Methods of sampling and testing road aggregates*;
NZS 3111:1986 *Methods of test for water and aggregate for concrete*;
Occupational health and safety guidelines, available at <https://worksafe.govt.nz/>.
- 2 Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- 3 **Definition**
Company procedures mean the documented methods for performing work activities and include health and safety, operational, environmental, and quality management requirements. They may refer to manuals, codes of practice, or policy statements.
- 4 This unit standard is intended for, but is not limited to, workplace assessment.

Outcomes and performance criteria

Outcome 1

Procure material samples of crushed stone and rock aggregates for testing.

Range crushed stone, rock aggregates.

Performance criteria

1.1 Field sampling of materials is planned in accordance with contract specifications.

Range stockpile location, sampling frequency, time-scale, site organisation, facilities, equipment.

1.2 Material types are identified in accordance with contract specifications.

Range may include but is not limited to – sealing chips, basecourse, hardfill, scalpings, concrete sand, concrete aggregates, asphalt aggregate, open graded materials.

1.3 Materials are sampled in accordance with company procedures and/or codes of practice.

Range may include but is not limited to – sample size, quartering, riffle box, splitting, batter boards, containers and labelling, dispatch.

Outcome 2

Arrange for material testing to be carried out.

Performance criteria

2.1 Types of laboratory tests required are identified in accordance with contract specifications and/or company procedures.

Range may include but is not limited to – weathering, crushing resistance, particle size distribution, polished stone value, percentage of broken faces, average least dimension, average greatest dimension, sand equivalent, clay index, cleanness value, plasticity index, California bearing ratio.

2.2 Suitability of proposed laboratory facility is checked in accordance with contract specification, testing requirements and/or company procedures.

Range test type, Telarc registration requirements, workload, test result deadlines, laboratory costs.

- 2.3 Laboratory is commissioned to carry out testing in accordance with company procedures.
Range contractual arrangements.
- 2.4 Samples are submitted in accordance with contractual arrangements and testing requirements.
Range sample submission, laboratory requirements.

Outcome 3

Collate testing records and review results.

Performance criteria

- 3.1 Material sampling is documented in accordance with contract specification and/or company procedures.
Range location, date, time, material type, dispatch to laboratory.
- 3.2 Laboratory test results are received and recorded in accordance with contract specifications and/ or company procedures.
Range may include but is not limited to – liaison with laboratory, forms, transport, time-scale, standard forms, record, quality control, report failures, communicate with superiors.
- 3.3 Laboratory test results are reviewed in accordance with contract specifications and/ or company procedures.
Range source rock suitability, screen settings, product quality, result repeatability.
- 3.4 Resultant alterations to contract work, where applicable, are commissioned in accordance with company procedures.

Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 November 1996	31 December 2019
Revision	2	17 December 1996	31 December 2019
Revision	3	18 December 1998	31 December 2019
Revision	4	17 April 2002	31 December 2019
Review	5	27 January 2005	N/A
Rollover and Revision	6	16 July 2010	N/A
Rollover and Revision	7	25 January 2018	N/A

Consent and Moderation Requirements (CMR) reference

0114

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

Comments on this unit standard

Please contact MITO New Zealand Incorporated info@mito.org.nz if you wish to suggest changes to the content of this unit standard.