

Title	Demonstrate knowledge of road drainage systems		
Level	4	Credits	6

Purpose	<p>This unit standard is for people who require an understanding of road drainage systems to install road drainage system structures and their connections.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – demonstrate knowledge of road drainage systems; and – identify and describe road drainage system maintenance.
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Classification	Infrastructure Works > Generic Road Works
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Available grade	Achieved
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Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with relevant legislative and industry requirements.
- 2 Legislation relevant to this unit standard include: Health and Safety at Work Act 2015; and all subsequent amendments and replacements.
- 3 Definitions

Industry requirements refer to relevant policies, processes, methodologies, industry codes of practice, site specific health and safety plans, standard operating procedures, site safety plans, quality plans, work plans, traffic management plans, contract work programmes, job safety analysis, safe work method statements, job instructions, manufacturer's requirements, contract specifications, manuals, procedural documents, Waka Kotahi New Zealand Transport Agency specifications and guidelines.

Technical instructions mean the defined procedures for the method of carrying out the construction process. For this unit standard, they include manufacturers' instructions, company procedural documents, local authority requirements, and contract specifications.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of road drainage systems.

Performance criteria

- 1.1 Drainage systems for surface stormwater, pavement, and subsoil drainage are described in terms of their suitability for site conditions.
- Range site conditions – steep slope, level ground, cross fall, sand, permeable gravel, swamp, low water table, high water table.
- 1.2 Materials used in road drainage systems are identified and their use for drainage is explained.
- Range at least three materials.
- 1.3 Effects of different pavement compositions on drainage requirements are described.
- Range pavements – chipseal, asphalt, unsealed.
- 1.4 Methods for ensuring that drainage channels relate to road pavement levels are described in accordance with technical instructions.
- Range open drain, kerb and channel.
- 1.5 Importance of orientation of perforations in drainage pipe is explained in accordance with technical instructions.
- 1.6 Use of geotextiles in road drainage systems is described in accordance with technical instructions.

Outcome 2

Identify and describe road drainage system maintenance.

Performance criteria

- 2.1 Reasons for maintaining road drainage are identified.
- Range three reasons.
- 2.2 Requirements for the maintenance of road drainage are described in accordance with technical instructions.
- Range pavement drainage, surface stormwater drains, subsoil drainage, road drains, culverts, sumps.
- 2.3 Requirements for maintenance of bridge deck drainage are described in accordance with technical instructions.

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	18 March 2011	31 December 2023
Review	2	19 February 2015	31 December 2023
Review	3	28 October 2021	N/A

Consent and Moderation Requirements (CMR) reference

0101

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

Comments on this unit standard

Please contact Connexis - Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.