

Title	Carry out maintenance operations on stormwater networks		
Level	3	Credits	20

Purpose	People credited with this unit standard are able to: demonstrate knowledge of stormwater networks; demonstrate knowledge of materials, fittings, and techniques used for stormwater networks; and carry out maintenance operations on stormwater networks.
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Classification	Infrastructure Works > Pipeline Construction and Maintenance
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Available grade	Achieved
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Guidance Information

- 1 Legislation and references relevant to this unit standard include: Health and Safety at Work Act 2015 and Resource Management Act 1991; *Excavation Safety – Good Practice Guidelines*, available from <https://worksafe.govt.nz>; NZS 4404:2010 Land Development and Subdivision Infrastructure, available from <http://www.standards.govt.nz>.
- 2 Assessment against this unit standard must take place in a workplace environment and the context must be specific to the candidate's own role on site. Assessment may be by simulation. Assessment parameters depend on company and site-specific equipment, procedures, and practices. Practices must reflect industry best practice and comply with legislative requirements.
- 3 Definitions
Company requirements include the policy, procedures, and methodologies of the company. They include legislative and regulatory requirements that may apply across the company or to a specific site. Requirements are documented in the company health and safety plans, traffic management plans, contract work programmes, quality plans, policies, and procedural documents.
Job instructions are instructions given to the operator prior to undertaking a job. They may include site safety instructions, contract drawings, and written memos.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of stormwater networks.

Performance criteria

- 1.1 Stormwater is described in terms of its quantity during rainfall events, catchment analysis, components and contaminants.
- 1.2 Stormwater networks are described in terms of their purpose and drainage considerations.
- 1.3 Components of stormwater networks are explained in terms of their purpose, function and inter-relationships.
- 1.4 Hydraulics of stormwater networks are explained in terms of causes and impact of flow rate changes, and runoff volumes and their management.
- 1.5 Quality control operations for stormwater networks are explained in accordance with company requirements.
- 1.6 Internal and external causes of pipe blockage or failure are explained in terms of their effects and prevention.

Outcome 2

Demonstrate knowledge of materials, fittings, and techniques used for stormwater networks.

Performance criteria

- 2.1 Types of stormwater pipe are described in terms of their features, handling, fittings, jointing requirements, and uses.
- 2.2 Types of pipe that may be encountered in older stormwater networks are described in terms of their maintenance requirements.

Range brick, cast iron, asbestos, concrete lined steel, steel.
- 2.3 Techniques for joining stormwater pipes and access chambers are described, including use of special couplers and flexible joints.
- 2.4 Rehabilitation and replacement of pipes are described in terms of the criteria for deciding whether to rehabilitate or replace, and rehabilitation and replacement techniques are explained in terms of their requirements and procedures.
- 2.5 Procedures when shutting down a stormwater network for maintenance are described in accordance with company requirements.
- 2.6 Pipe unblocking, overflow management, and silt removal are described in accordance with company requirements.

Outcome 3

Carry out maintenance operations on stormwater networks.

Performance criteria

- 3.1 Job instructions are checked and confirmed, and materials and tools are selected in accordance with company requirements.
- 3.2 Network flow is reduced or stopped to allow work to take place in accordance with job instructions and company requirements.
- 3.3 Excavation and any required groundwater control are carried out safely and in accordance with company requirements.
- 3.4 Clearing and unblocking is carried out in accordance with job instructions and company requirements.
- 3.5 Components and connections are installed in accordance with job instructions and company requirements.
- 3.6 Backfill, compaction and reinstatement are completed in accordance with job instructions and company requirements.
- 3.7 Cleaning and maintenance of stormwater network components is completed in accordance with job instructions and company requirements.
- 3.8 Spills and overflow are managed and contaminated debris is disposed of in accordance with legislative and company requirements.

Replacement information	<p>This unit standard and unit standard 31450 were replaced by unit standard 32814 and unit standard 32815.</p> <p>This unit standard replaced unit standard 11312, unit standard 22114, and unit standard 24923.</p>
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 September 2018	31 December 2023
Review	2	26 August 2021	31 December 2023

Consent and Moderation Requirements (CMR) reference	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.