

Title	Demonstrate knowledge of and carry out work operations for trenchless pipe installation		
Level	3	Credits	20

Purpose	People credited with this unit standard are able to demonstrate knowledge of trenchless pipe installation, and carry out work operations for trenchless pipe installation.
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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, Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016, Resource Management Act 1991, and Electricity Act 1992;
National Code of Practice for Utility Operators' Access to Transport Corridors 2016, available from <http://nzuag.org.nz/national-code/>;
Excavation Safety – Good Practice Guidelines July 2016 and NZECP 34:2001 – *New Zealand Electrical Code of Practice for Electrical Safe Distances*, available from <https://worksafe.govt.nz>;
 NZS 4404:2010 *Land Development and Subdivision Infrastructure*, available from <http://www.standards.govt.nz>;
 Territorial authority requirements.
- 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 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.
Pipe can include pipes not intended to carry fluid, for example ducting for communications cable.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of trenchless pipe installation.

Performance criteria

- 1.1 Pipe networks are described in terms of purpose and function, and reasons and criteria for using trenchless installation methods are explained.
- 1.2 Ground conditions that affect trenchless pipe installation are described in terms of their effects and company requirements for their management.
- Range composition of ground, contour, water table height, pH.
- 1.3 Types and classes of pipe used in trenchless installation are described in terms of their features, uses, handling and storage requirements, and capacity to absorb the forces of installation.
- Range three types of pipe.
- 1.4 Joints, end fixings, and anchoring used in trenchless pipe installation are described in terms of their purpose, function, and suitability for specific applications.
- 1.5 A trenchless pipe installation method is described in terms of sequence of tasks and equipment and materials used, and in accordance with company requirements.
- Range materials must include – any drilling fluids used and their function, types, and suitability for specific ground conditions.
- 1.6 Safety requirements of trenchless pipe installation are described in accordance with company requirements.
- 1.7 Public and environmental considerations when installing pipelines using trenchless methods are explained in accordance with company requirements.
- 1.8 Causes, effects and prevention techniques of pipe failures associated with installation are described.

Outcome 2

Carry out work operations for trenchless pipe installation.

Range three operations.

Performance criteria

- 2.1 Job instructions are obtained and confirmed, and tools are selected, checked, and confirmed as fit for purpose in accordance with company requirements.
- 2.2 All safety, environmental, and communication protocols are confirmed as in place before starting work in accordance with company requirements.
- 2.3 Locations of adjacent services are confirmed prior to commencement of work in accordance with company requirements.
- 2.4 Any required excavation and groundwater control are carried out safely and in accordance with company requirements.
- 2.5 Equipment is set up in accordance with job instructions and company requirements.
- 2.6 Pipe is set up and installed as required by pipe type in accordance with job instructions and company requirements.
- 2.7 Pipeline is cleared, capped if required, and prepared for commissioning in accordance with job instructions and company requirements.
- 2.8 Site is disestablished and reinstatement of site is completed in accordance with job instructions and company requirements.

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 2025
Review	2	26 August 2021	31 December 2025
Revision	3	29 September 2022	31 December 2025

Consent and Moderation Requirements (CMR) reference

0101

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