

Title	Demonstrate knowledge of and pre-check infrastructure pipes, fittings and structures		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to demonstrate knowledge of pipes and pipe fittings for infrastructure pipelaying and conduct pre-installation checks, and demonstrate knowledge of, and pre-check, structures for infrastructure pipelaying.
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Classification	Civil Works and Services > Civil Construction Works
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Available grade	Achieved
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Guidance Information

- 1 The following legislation and requirements apply to this unit standard:
Health and Safety in Employment Act 1992;
Territorial authority requirements;
Manufacturer’s instructions.
- 2 Assessment against this unit standard may be based on evidence from a provider and/or workplace context.
- 3 Personal protective equipment, appropriate to job requirements, is to be selected and used in accordance with company procedures and manufacturer’s instructions.
- 4 Definitions
CLS – concrete lined steel.
Company requirements include the policy, procedures, and methodologies of the company. They include legislative and regulatory requirements, which may apply across the company or to a specific site. Requirements are documented in the company’s health and safety plans, traffic management plans, contract work programmes, quality assurance programmes, policies, and procedural documents.
Contract specifications include plans, diagrams, and special technical conditions. They do not include special administrative conditions.
Fittings include connections (tapping saddles, junctions, access point connectors), bends (sweeping, tight), valves (isolation, backflow, pressure reducing, air release), filters, joiners, hydrants, and meters.
Infrastructure pipelaying refers to the installation of infrastructure pipes, fittings, and associated structures in the road and elsewhere, normally beyond the boundary of private property. Infrastructure pipes include sanitary sewage and stormwater, and may include pipes or ducting for other services such as water, gas, electricity, or telecommunications. For the purposes of this unit standard it does not include the

commissioning of the pipes or the installation of services they may house; nor does it include jointing required to be carried out by a licensed specialist.

Lamphole cleaning eyes are also known as rodding eyes.

Manufacturer's instructions may include specifications; installation, handling, use, and maintenance instructions; and safety data sheets.

PE – polyethylene.

Pre-check refers to checking, usually on-site, sometime prior to actual installation operations.

PVC – polyvinyl chloride.

Sumps are also known as cesspits.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of pipes and pipe fittings for infrastructure pipelaying, and conduct pre-installation checks.

Performance criteria

- 1.1 Different types of pipes are identified and their uses explained.
- Range pipe types – PVC, PE, ductile iron, CLS, reinforced concrete, earthenware, steel, asbestos cement.
- 1.2 Different types of fittings are identified and their uses explained.
- Range fittings include at least one type of connection, at least one type of bend, and at least one type of valve.
- 1.3 Ratings for pipes and fittings are explained in terms of pipe use.
- Range may include but is not limited to – PVC, PE, ductile iron, CLS, reinforced concrete, earthenware, steel; three types of pipe.
- 1.4 Sighted pipes and fittings are checked against contract specifications and any apparent discrepancies are identified and reported in accordance with company requirements.
- Range three types of pipe, total of five fittings.
- 1.5 Handling and site storage for pipes and their fittings are described in accordance with manufacturer's instructions.
- Range three types of pipe, total of five fittings.
- 1.6 Pre-installation checks are conducted on pipes and fittings in accordance with manufacturer's instructions and company requirements, and any damage and/or flaws are identified and reported or rectified in accordance with company requirements.

Range three types of pipe, total of five fittings.

Outcome 2

Demonstrate knowledge of, and pre-check, structures for infrastructure pipelaying.

Performance criteria

2.1 Different types of structures and their purposes are identified.

Range may include but is not limited to – wet access chamber, dry access chamber, sump, thrust block, anchor block, wing wall, flumes, lamphole cleaning eye; four types of structures.

2.2 Structure information is checked for compliance with contract specifications and suitability for the application, and any apparent discrepancies are identified and reported in accordance with company requirements.

Range wet access chamber and three other types of structure.

2.3 Sighted precast structures are checked against plans, job specifications, and suitability for the application, and any discrepancies are identified and reported in accordance with company requirements.

Range wet access chamber and three other types of structure.

Replacement information	This unit standard was replaced by unit standard 31517.
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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	26 January 2007	31 December 2021
Review	2	21 November 2008	31 December 2021
Review	3	29 November 2018	31 December 2021

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>.