

Title	Describe CCTV inspection of non-pressure water services assets		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to describe: the role of closed circuit television (CCTV) in non-pressure water services asset management; the preparation of assets for survey by CCTV; and procedures for survey of assets using a CCTV, and recording and/or coding pipe conditions.
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Classification	Water Industry > Water Reticulation
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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 applicable legislative and industry requirements.
- 2 Legislation and references relevant to this unit standard include: Local Government Act 2002, Water Services Act 2021, Resource Management Act 1991, Health and Safety at Work Act 2015, and subsequent amendments;
Water New Zealand, *New Zealand Gravity Pipe Inspection Manual* (4th ed.), Water New Zealand: Wellington, 2019, available from <http://www.waternz.org.nz>.
- 3 Definitions
Industry requirements may refer to but are not limited 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.
Non-pressure water services – in this context refers to all pipe systems, pumping systems, and components that contribute to the collection and disposal of wastewater and stormwater.

Outcomes and performance criteria

Outcome 1

Describe the role of CCTV in non-pressure water services asset management.

Performance criteria

- 1.1 CCTV inspection is described in terms of its uses and limitations, and the types of assets that can be inspected.
- 1.2 CCTV inspection is described in terms of the types of information that can and cannot be determined from an inspection.
- 1.3 Information determined from CCTV inspection is described in terms of its applications in non-pressure water services asset management.
- 1.4 CCTV inspection is described in terms of considerations for ensuring inspections serve their intended purpose.

Outcome 2

Describe the preparation of assets for survey by CCTV.

Performance criteria

- 2.1 Hazards associated with CCTV inspection of assets are described in terms of organisational procedures for their mitigation.
- 2.2 Considerations for determining whether a pipe should be cleaned in preparation for inspection by CCTV are described.
- 2.3 Processes for cleaning pipes in preparation for CCTV inspection are described in terms of protection of pipes and adjacent assets and removal of debris.
- 2.4 Provisions for flow management while inspection is carried out with CCTV are described in accordance with site conditions.
- 2.5 Inspection using CCTV is described in terms of the relationship between pipe cleaning and accuracy of results.

Outcome 3

Describe procedures for survey of assets using a CCTV, and recording and/or coding pipe conditions.

Performance criteria

- 3.1 Procedures for survey of assets in a systematic manner are described in accordance with organisational procedures.

Range planning, direction and speed of camera in relation to pipe size, start and finish location, required picture quality, screen header contents, on-screen displays.
- 3.2 Procedures for recording and identifying pipe material, pipe sizes, joint spacing, pipe use, and depth to invert are described.

3.3 Procedures for recording and/or coding pipe defects or features are described.

Replacement information	This unit standard, unit standard 30095, and unit standard 30096 replaced unit standard 22107.
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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	16 March 2017	31 December 2023
Review	2	24 March 2022	N/A

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>.

Comments on this unit standard

Please contact Waihangā Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihanga.nz if you wish to suggest changes to the content of this unit standard.