

Title	Demonstrate knowledge of 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; describe the preparation of assets for survey by CCTV; and describe 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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Explanatory notes

- 1 Legislation and references relevant to this unit standard include: Local Government Act 2002, Resource Management Act 1991, Health and Safety at Work Act 2015, and subsequent amendments;
AS 2865:2009 *Confined spaces*, available from <https://infostore.saiglobal.com/>;
New Zealand Pipe Inspection Manual (current edition), available from <http://www.waternz.org.nz>.
- 2 Definitions
Organisational procedures – instructions to staff, and procedures which are documented in memo or manual format and are available in the workplace. These procedures include but are not limited to – site specific procedures, laboratory procedures, manufacturers' specifications, product quality specifications and reference to legislative or regulatory procedures relevant to the industry.
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 evidence requirements

Outcome 1

Describe the role of closed circuit television (CCTV) in non-pressure water services asset management.

Evidence requirements

- 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.

Evidence requirements

- 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 in accordance with organisational procedures.
- 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.

Evidence requirements

- 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 in accordance with organisational procedures.
- 3.4 Procedures for recording and/or coding pipe defects or features are described in accordance with organisational procedures.

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 2021
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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	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>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

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