

<b>Title</b>	<b>Carry out CCTV inspection of non-pressure water services assets</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>6</b>

<b>Purpose</b>	People credited with this unit standard are able to: prepare to carry out closed circuit television (CCTV) inspection of non-pressure water services assets; select and set up CCTV equipment for inspection of non-pressure water services assets; and carry out a CCTV inspection of non-pressure water services assets.
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<b>Classification</b>	Water Industry > Water Reticulation
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<b>Available grade</b>	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* (4thed.), 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

Prepare to carry out CCTV inspection of non-pressure water services assets.

**Performance criteria**

1.1 Planning for inspection is carried out.

Range access, notifications, pipe cleaning, equipment, work instructions, known history/problems.

1.2 Provisions for ensuring safety during CCTV inspection are implemented.

1.3 Provisions for managing flow during CCTV inspection are implemented.

**Outcome 2**

Select and set up CCTV equipment for inspection of non-pressure water services assets.

**Performance criteria**

2.1 CCTV and equipment are selected in accordance with pipe size, type, and length, depth of manhole, and flow conditions.

2.2 CCTV is positioned in the manhole or pipe in accordance with pipe size, type, and length, depth of manhole, and flow conditions.

2.3 CCTV settings are adjusted in accordance with site conditions.

Range recording, lighting, focus lens angle, camera head, screen header information, preset distance.

**Outcome 3**

Carry out a CCTV inspection of non-pressure water services assets.

**Performance criteria**

3.1 View of manhole and entry into the pipe is recorded at the start of the inspection.

3.2 Camera speed, alignment, distance measurement counter and camera head position are maintained.

3.3 Conditions in pipe that might affect the inspection, and camera settings, are monitored to ensure the required inspection quality is met.

Range debris, fat, roots, cobwebs, fog, grease or water on lens flow depth, lighting.

3.4 All pipe defects and features are identified and recorded.

Range position of camera to view the defect or feature, stationary time, still images, pan and tilt.

3.5 Inspection is ended with recording of correct screen header.

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<b>Replacement information</b>	This unit standard, unit standard 30094, and unit standard 30096 replaced unit standard 22107.
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<b>Planned review date</b>	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

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

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**Comments on this unit standard**

Please contact Waihangara Ara Rau Construction and Infrastructure Workforce Development Council at [qualifications@waihangara.nz](mailto:qualifications@waihangara.nz) if you wish to suggest changes to the content of this unit standard.