

<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.
----------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<b>Classification</b>	Water Industry > Water Reticulation
-----------------------	-------------------------------------

<b>Available grade</b>	Achieved
------------------------	----------

---

### 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

Prepare to carry out closed circuit television (CCTV) inspection of non-pressure water services assets.

**Evidence requirements**

1.1 Planning for inspection is carried out in accordance with organisational procedures.

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

1.2 Provisions for ensuring safety during CCTV inspection are implemented in accordance with organisational procedures.

1.3 Provisions for managing flow during CCTV inspection are implemented in accordance with organisational procedures.

**Outcome 2**

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

**Evidence requirements**

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.

**Evidence requirements**

3.1 View of manhole and entry into the pipe is recorded at the start of the inspection in accordance with organisational procedures.

3.2 Camera speed, alignment, distance measurement counter and camera head position are maintained in accordance with organisational procedures.

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

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 in accordance with organisational procedures.

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

3.5 Inspection is ended with recording of correct screen header in accordance with organisational procedures.

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

<b>Planned review date</b>	31 December 2021
----------------------------	------------------

#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	16 March 2017	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0101
------------------------------------------------------------	------

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](mailto:qualifications@connexis.org.nz) if you wish to suggest changes to the content of this unit standard.