

Title	Determine water supply requirements in buildings, and install, secure, and maintain pipework		
Level	3	Credits	6

Purpose	<p>This unit standard is for people who work, or intend to work, in the drainlaying industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – determine water supply requirements in buildings; – install and secure water supply pipework in buildings; and – maintain water supply pipework in buildings.
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Classification	Plumbing, Gasfitting and Drainlaying > Plumbing
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Available grade	Achieved
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Guidance Information

1 References

Health Act 1956.

Health and Safety at Work Act 2015;

Plumbers, Gasfitters, and Drainlayers Act 2006;

Plumbers, Gasfitters, and Drainlayers Regulations 2010;

Resource Management Act 1991;

The following standards, which are available at <http://www.standards.govt.nz>:

AS/NZS 3500.1:2015 *Plumbing and drainage – Part 1: Water services*,

AS/NZS 3500.4:2015 *Plumbing and drainage – Part 4: Heated water services*,

NZS 3604:2011 *Timber-framed buildings*,

NZS 5807:1980 *Code of practice for industrial identification by colour, wording or other coding*;

The following guides, which are available at <http://www.worksafe.govt.nz>:

Excavation Safety – Good practice Guidelines,

Underground services – Guide for safety with underground services;

The following clauses, and any related compliance documents, which are available at

<https://www.building.govt.nz/>:

New Zealand Building Code Clause G10 Piped Services,

New Zealand Building Code Clause G12 Water Supplies;

and all subsequent amendments and replacements.

2 Range

water supply pipework includes but is not limited to – copper, galvanised mild steel, polybutylene, polyethylene, unplasticised polyvinylchloride (uPVC), cross-linked polyethylene, polypropylene, and associated fittings;

jointing methods – are determined according to the material being joined, and may include brazing, compression, crimp, crox, flange, fusion weld, glued, push fit,

screwed thread.

For assessment, the skills in performance criteria 1.1, 2.2, and 2.3 must be demonstrated using copper, polybutylene, and two other materials. For other performance criteria, the skill can be demonstrated using any material.

- 3 This unit standard applies to the installation of water supply pipework above and below the ground but does not apply to the installation of water mains under control of a network utility operator.
- 4 **Definitions**
Job requirements – specific requirements of the job at hand not covered by job specifications.
Job specifications – instructions (oral, written, graphic) and may include any of the following: manufacturer instructions; design drawing detail specifications; specifications from a specialist source such as an architect, designer, engineer, or a supervisor; and site or work specific requirements. Where job specifications are in conflict with applicable legislation, standards, and/or codes, such legislation, standards, and/or codes shall take precedence for the purpose of assessment.
Maintain may refer to all or any of – repair, upgrade, alter, remove.
Other services – any existing installed services.
- 5 All practical activities must be carried out in a way that avoids harm to people and damage to property, environment, other services, materials, tools, and equipment.
- 6 Candidates must hold a current limited certificate or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.
- 7 Recommended skills and knowledge for the unit standard: Unit 30532, *Demonstrate knowledge of excavating and trenching for plumbing, gasfitting, or drainlaying.*

Outcomes and performance criteria

Outcome 1

Determine water supply requirements in buildings.

Performance criteria

- 1.1 Select size of pipe according to available pressure (head), delivery rate requirements, water velocity rate and/or limit, loading rates, and probable simultaneous flow rate.

Outcome 2

Install and secure water supply pipework in buildings, in accordance with job specifications, relevant codes and standards, and the requirements of the Building Act 2004.

Performance criteria

- 2.1 Cut pipes to size accurately.

- 2.2 Secure water supply pipework.
- 2.3 Joint pipes using methods and fittings appropriate to the material being joined.
- 2.4 Carry out soundness tests.
- 2.5 Protect water supply pipework against physical damage.

Range may include but is not limited to – corrosion, ultra-violet light, expansion, contraction, traffic, seismic activity, freezing, heating; evidence of four is required.

- 2.6 Identify pipeline by label and/or colour.

Outcome 3

Maintain water supply pipework in buildings in accordance with maintenance requirements, job specifications, and relevant standards and codes.

Performance criteria

- 3.1 Assess installed water supply pipework for correct operation.
- 3.2 Identify the causes of faults.
- 3.3 Rectify faults in accordance with maintenance requirements, job specifications, and relevant standards and codes.
- 3.4 Perform appropriate post maintenance commissioning processes.

Replacement information	This unit standard and unit standard 30605 replaced unit standard 2143.
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Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 October 2017	N/A

Consent and Moderation Requirements (CMR) reference	0003
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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 The Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.