

Title	Demonstrate knowledge of foul water systems		
Level	4	Credits	9

Purpose	<p>This unit standard is for people who work in the plumbing industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – demonstrate knowledge of the installation and securing of foul water systems in buildings in accordance with job specifications and regulatory requirements; and – demonstrate knowledge of regulatory requirements, processes selection of methods and materials, and underpinning concepts and principles, as applied to the installation, securing, and maintenance of foul water systems.
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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

Building Act 2004;
 Building Regulations 1992;
 Health and Safety at Work Act 2015;
 Plumbers, Gasfitters, and Drainlayers Act 2006;
 Plumbers, Gasfitters, and Drainlayers Regulations 2010;
 The following standards, which are available at <https://www.standards.govt.nz>:
 AS/NZS 3500.2:2015 *Plumbing and drainage – Sanitary plumbing and drainage*,
 NZS 3604:2011 *Timber-framed buildings*,
 NZS 5807:1980 *Code of practice for industrial identification by colour, wording or other coding*;
 The following clauses, current versions, 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 G13 Foul Water;
 and all subsequent amendments and replacements.
- 2 Range

Pipework – ABS, cast iron, copper, glass, lead, polypropylene, unplasticised polyvinylchloride (uPVC), polyethylene, includes associated fittings;
 Traps – grease, trade waste, fixture traps, floor waste gully traps.

3 Definitions

Foul water systems – systems for conveying foul water to the outside of the building without leakage, blockage, or allowing foul air to enter the building.

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.

- 4 Candidates must hold a current limited certificate or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the installation and securing of foul water systems in buildings in accordance with job specifications and regulatory requirements.

Range Building Code Clause G13 – Foul Water: AS1 – Sanitary Plumbing, and AS3 – Plumbing and Drainage; single-level, multi-level up to three storeys.

Performance criteria

- 1.1 Identify suitable foul water systems to be installed.
- 1.2 Describe appropriate specifications for foul water systems to meet identified requirements.
- Range system elements include sizing, venting, gradients.
- 1.3 Describe methods of jointing pipes in foul water systems, including pipes of different materials.
- 1.4 Explain the requirements for securing foul water pipework.
- 1.5 Describe appropriate soundness tests for foul water systems.
- 1.6 Describe appropriate means of protecting system components expansion, contraction, traffic, seismic activity, freezing, heating, acoustic insulation.
- 1.7 Explain the requirements to identify system pipelines by system and/or colour and direction of flow.
- 1.8 Describe methods of venting for foul water systems.

Outcome 2

Demonstrate knowledge of regulatory requirements, processes, selection of methods and materials, and underpinning concepts and principles, as applied to the installation, securing, and maintenance of foul water systems.

Performance criteria

2.1 Describe applicable sections of legislation, standards, and codes in terms of their application to the installation, securing, and maintenance of foul water systems.

2.2 Describe processes for identifying and confirming non-compliant foul water installations and communicating required changes to consumer.

2.3 Justify selection of methods and materials.

Range job specifications, operation of the installed system and components, prudent use and longevity of materials; may include job requirements.

2.4 Explain the application of underpinning concepts and principles to the installation, securing, and maintenance of foul water systems.

Range atmospheric pressure, expansion and contraction, flow of water in stacks, hydraulic jump, loss of water seal, acoustics, venting, gradient.

2.5 Describe maintenance requirements of foul water systems.

Range fault rectification, preventative maintenance.

Replacement information	This unit standard, unit standard 30543, and unit standard 30544 replaced unit standard 2144.
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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.