

Title	Verify drainage systems and consider and select solutions for the system		
Level	5	Credits	10

Purpose	People credited with this unit standard will be able to: <ul style="list-style-type: none"> – verify drainage systems; and – consider and select solutions to mitigate adverse effects of a drainage system.
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Classification	Plumbing, Gasfitting and Drainlaying > Drainlaying
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Available grade	Achieved
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Guidance Information

- 1 This unit standard builds upon the pre-existing knowledge and skills held by a tradesman drainlayer. It reflects part of the increased knowledge and skill set that is required to become recognised as a certifying drainlayer. The competencies expected of a tradesman drainlayer have already been demonstrated and reassessment is not required.

- 2 References
Building Act 2004;
New Zealand Building Code;
Construction Contracts Act 2002;
Health Act 1956;
Health and Safety at Work Act 2015;
Plumbers, Gasfitters, and Drainlayers Act 2006;
Plumbers, Gasfitters and Drainlayers Board (Drainlaying Registration and Licensing) Notice 2016;
Resource Management Act 1991;
The following standards, which are available at <http://www.standards.govt.nz>:
AS/NZS 1546.1:2008 *On-site domestic wastewater treatment units – Septic tanks*;
AS/NZS 1547:2000 *On-site domestic wastewater management*;
AS/NZS 3500.2:2018 *Plumbing and drainage – Part 2: Sanitary plumbing and drainage*;
AS/NZS 3500.3:2018 *Plumbing and drainage – Part 3: Stormwater drainage*;
The following guides, which are available at <http://www.worksafe.govt.nz>:
Excavation Safety: 2016;
Guide for Safety with Underground Services: 2002;
Health and Safety by Design: 2018;
and all subsequent amendments and replacements.

- 3 Definition
Compliance requirements – requirements of the New Zealand Building Code; the Building Act 2004; and any other relevant legislation, regulations, codes, or standards as applicable to drainlaying.
- 4 Assessment
Assessments requiring application or demonstration of skills and knowledge may be performed using workplace evidence or evidence derived from simulation or scenario-based activities.
Includes application of trade calculations and science. Trade calculations and science may be demonstrated through the use of graphs, tables, software tools, or online or other electronic resources.
- 5 All tasks must be carried out in accordance with:
Building Act 2004;
Health and Safety at Work Act 2015;
New Zealand Building Code; and
any other relevant legislation, regulations, codes, or standards as applicable to drainlaying.

Outcomes and performance criteria

Outcome 1

Verify drainage systems.

Range includes a minimum of three systems;
systems include but are not limited to – foul water system, stormwater system;
includes one system of – trade waste system, on-site effluent disposal and
wastewater treatment system;
one system must include a pump which is an integral part of the system.

Performance criteria

- 1.1 Review drainage systems to confirm they comply with their designs.
- 1.2 Review drainage systems to confirm they comply with compliance requirements.
- 1.3 Review drainage systems to identify their potential adverse effects on structures and sites.

Range may include but is not limited to – structural integrity, excavations, ground stability, soil types, site safety, positioning of system in relation to other services.
- 1.4 Perform tests to confirm correct operation of drainage systems.

Outcome 2

Consider and select solutions to mitigate adverse effects of a drainage system.

Range consideration may be based on but is not limited to – design of system, compliance requirements.

Performance criteria

2.1 Consider and select solutions to mitigate issues with a drainage system.

Range issues may include but are not limited to – not in accordance with the design, does not operate as intended.

2.2 Consider and select solutions to mitigate adverse effects of a drainage system on structures and site.

Range adverse effects of system on structures and site may include but are not limited to – structural integrity, excavations, ground stability, soil types, site safety, positioning of system in relation to other services.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 March 2020	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.