

Title	Describe domestic wastewater land application systems and the factors affecting their selection		
Level	4	Credits	8

Purpose	People credited with this unit standard are able to describe: land application systems used for domestic wastewater, and the factors affecting the selection of land application systems.
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Classification	Water Industry > Wastewater Treatment
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Available grade	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, regulations and standards relevant to this unit standard include but are not limited to the:
 - Resource Management Act 1991;
 - Building Act 2004 and relevant Building Codes;
 - Health Act 1956, and subsequent amendments;
 - regional and district plans;
 - regulatory authority requirements;
 - AS/NZS 1547:2012 *On-site domestic wastewater management*, available from <http://www.standards.govt.nz>.
- 3 Definition

Industry requirements include manufacturers' specifications; and enterprise requirements which cover the documented workplace policies, procedures, specifications, business, and quality management requirements relevant to the workplace in which assessment is carried out.
- 4 It is recommended that the assessor uses design guidelines issued by the regional or local authorities in the candidate's locality.
- 5 Credit for this unit standard does not qualify the candidate to work in a drainlaying situation that comes under the drainlayer's licence requirements issued under the Plumbers, Gasfitters, and Drainlayers Act 2006 and any subsequent amendments.

Outcomes and performance criteria

Outcome 1

Describe land application systems used for domestic wastewater.

Range includes – trench systems, beds, mounds, low-pressure effluent distribution, irrigation.

Performance criteria

1.1 Land application systems are described in terms of their function and effluent distribution method.

1.2 Land application systems are described in terms of their design requirements.

Range includes but is not limited to – design loading rates, applied effluent quality, land area requirements, evapotranspiration assist, reserve areas, dosing and resting requirements, commissioning requirements.

1.3 Land application systems are described in terms of the treatment level required.

1.4 Land application systems are described in terms of their configuration and construction.

Range may include – media requirements, planting, surface and subsurface irrigation, water-flow paths, controls and system.

Outcome 2

Describe the factors affecting the selection of land application systems.

Performance criteria

2.1 The effect of soil category on the selection of the land application system is described.

Range includes but is not limited to – soil texture and structure, indicative permeability, indicative drainage characteristics.

2.2 The effect of site and soil constraints on the selection of the land application system is described.

Range includes but is not limited to – soil profile, restrictive horizon, slope, contour, aspect, vegetation, clearances to site features.

2.3 The effect of environmental constraints on the selection of the land application system is described.

Range includes but is not limited to – neighbouring systems, separation distances, nutrients, pathogens, rainfall intensity, local uses of groundwater and surface waters, climate change.

2.4 The effect of client requirements and cost factors on the selection of the land application system is described.

Range includes but is not limited to – technology choice, construction options, operation and maintenance implications, monitoring and inspection responsibilities.

2.5 The effect of regional and district council requirements on selection of the land application system is described.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 October 2008	31 December 2018
Rollover and Revision	2	16 February 2017	31 December 2022
Review	3	23 July 2020	N/A

Consent and Moderation Requirements (CMR) reference	0101
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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 Connexis - Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.