

# Unit of Competency CPCPDR4013

## Design and size domestic treatment plant disposal systems

### Application

This unit specifies the skills and knowledge required to design, size and document the layout of domestic treatment plant disposal systems for a residential design that comprises a dwelling (Class 1a).

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

### Prerequisite Unit

Nil.

### Elements and Performance Criteria

1. Identify system requirements.	<p>1.1 Access, read and determine design requirements from plans, specifications, relevant manufacturer's requirements, Australian Standards and jurisdictional requirements.</p> <p>1.2 Identify and apply workplace policies and procedures, work health and safety (WHS) and environmental requirements.</p> <p>1.3 Obtain and confirm information for a suitable location for the land application area, reserve area and onsite land application of effluent.</p>
2. Design system layout.	<p>2.1 Develop and size system layout in accordance with relevant manufacturer's requirements, Australian standards and jurisdictional requirements.</p> <p>2.2 Use the proposed design to identify and specify optimal materials required.</p> <p>2.3 Produce final system layout plans to relevant drawing design standards.</p>

### Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

### Unit Mapping Information

Supersedes and is equivalent to CPCPDR4013B Design and size domestic treatment plant disposal systems.

### Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

# Assessment Requirements for CPCPDR4013

## Design and size domestic treatment plant disposal systems

### Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria for this unit by:

- designing, sizing and documenting the layout of a treatment plant disposal system for a residential design that comprises a dwelling (Class 1a), including details of:
  - treatment plant
  - disposal field
  - relationship of the above to any buildings, property boundaries, easements and other structures.

### Knowledge Evidence

To be competent in this unit, a person must demonstrate knowledge of:

- design concepts and performance measures for domestic treatment plant disposal systems
- principles of the assessment of land capability for application of effluent
- principles, techniques and characteristics of effluent treatment and disposal, including the purpose of anaerobic bacteria
- properties and characteristics of landscape application areas
- site characteristics that may influence planning:
  - contour, reduced and invert levels
  - type of system chosen
  - soil category
  - design loading rates (DLR)
  - long term acceptance rate (LTAR)
  - number of people the system is to cater for
- identifying scope of work by waste processing method:
  - absorption by absorption trenches or transpiration beds
  - disposal by absorption, spray or recycling
  - anaerobic or aerobic action
- drawing instruments and sketching techniques, including the use of conventional symbols
- use of computers for documentation
- computer-aided design (CAD) software
- how to access relevant information, including codes and standards
- tools, materials and equipment used to design, size and document the layout of domestic treatment plant disposal systems
- work health and safety (WHS) requirements for designing, sizing and documenting the layout of domestic treatment plant disposal systems.

## Assessment Conditions

Assessors must satisfy the requirements for assessors listed in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

## Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>