



Australian Government

CPCPDR4013 Design and size domestic treatment plant disposal systems

Release: 1

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Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCPDR4013B Design and size domestic treatment plant disposal systems. Updated to meet the Standards for Training Packages 2012.

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.

Pre-requisite Unit

Nil.

Unit Sector

Plumbing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

1 Identify system requirements.

1.1 Access, read and determine design requirements from plans, specifications, relevant manufacturer's requirements, Australian Standards and jurisdictional requirements.

1.2 Identify and apply workplace policies and procedures, work health and safety (WHS) and environmental requirements.

1.3 Obtain and confirm information for a suitable location for the land application area, reserve area and onsite land

application of effluent.

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|---|-----------------------|-----|---|
| 2 | Design system layout. | 2.1 | Develop and size system layout in accordance with relevant manufacturer's requirements, Australian standards and jurisdictional requirements. |
| | | 2.2 | Use the proposed design to identify and specify optimal materials required. |
| | | 2.3 | Produce final system layout plans to relevant drawing design standards. |

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 volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCPDR4013 Design and size domestic treatment plant disposal systems

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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

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