



Australian Government

CPCPPS5025 Design grey water re-use systems

Release: 2

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Modification History

- Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.
Typographical error corrected in Element 1.7.
- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCPPS5025A Design grey water re-use systems. Updated to meet the Standards for Training Packages 2012.

Application

This unit specifies the skills and knowledge required to design grey water re-use systems. The unit addresses the collection, treatment, diversion and storage options for the design of grey water re-use systems for wide span and high-rise mixed development building projects.

The role may involve interaction with architects, builders, suppliers, clients and relevant planning authorities and requires a sound understanding of applicable legislation, standards and codes.

The requirements of this unit are typically carried out by experienced people such as hydraulic design consultants or design engineers.

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 and Fire Services

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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| 1 Evaluate design parameters. | 1.1 Establish scope of work for design of grey water re-use systems for wide span and high-rise building projects. |
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- 1.2 Establish performance requirements considering the safety of system users or building occupants.
 - 1.3 Determine design requirements from relevant Australian Standards, codes, plans, specifications and client brief.
 - 1.4 Identify potential household or community health and environmental risks and take measures to protect public health that impact the design parameters.
 - 1.5 Apply sustainability principles and concepts as part of the design process.
 - 1.6 Conduct additional research to outline design parameters.
 - 1.7 Interpret manufacturer requirements and trade and technical manuals for grey water re-use systems.
 - 1.8 Conduct cost-benefit analysis for implementing the proposed design.
- 2 Plan and detail system components.
- 2.1 Detail primary, secondary and advanced secondary treatment and tertiary systems.
 - 2.2 Plan layout of pipework systems including type and location of fittings, valves, controls and other system components.
 - 2.3 Design and detail changes to building drainage system and identify inspection requirements.
 - 2.4 Evaluate and detail grey water land application, disposal, diversion, storage and wet weather storage options to identify problems and plan solutions.
 - 2.5 Plan and detail stored and pressurised grey water systems for irrigation, sanitary flushing and other approved uses.
 - 2.6 Plan and detail storage tanks and approved disposal options.
 - 2.7 Calculate pipe size and pump duty and size and detail pumpwell, pump and pump control requirements.
 - 2.8 Evaluate approved materials and jointing methods for grey water re-use systems, design pipe supports and specify installation requirements.

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| 3 Design and size systems. | 3.1 Design grey water re-use systems for residential, commercial and industrial applications which include water treatment and backflow protection of drinking and non-drinking water supply systems. |
| | 3.2 Design grey water re-use systems to ensure that the systems can be properly and safely maintained. |
| | 3.3 Design and size grey water re-use systems using relevant computer software packages. |
| 4 Prepare documentation. | 4.1 Prepare client brief of the proposed design. |
| | 4.2 Prepare plans and specifications for grey water re-use systems. |
| | 4.3 Prepare testing and commissioning schedule. |
| | 4.4 Produce operation and maintenance manual including information on how to properly and safely maintain the system. |

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 CPCPPS5025A Design grey water re-use 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>