



Australian Government

Assessment Requirements for AHCPER326 Install and maintain permaculture water management systems

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 9.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- organised resources for installation work
- set out and prepared site
- installed permaculture water systems materials and components, excluding works requiring a licensed plumber
- installed a water capture system, which must include any one of the following:
 - swales
 - contour banks or terraces
 - mulch-pit paths
 - diversion channels or other passive installation
 - roof and gutter system
- installed and prepared access to a water storage system, which must include any one of the following:
 - dam
 - well or ground water
 - water tank or bladder
- installed and prepared access to a water distribution system, integrated with the storage system, which must include any one of the following:
 - pump
 - gravity or syphon system
 - channels
 - bores
 - hand distribution system
- installed water treatment system according to permaculture water system design

- adjusted water distribution system to deliver water according to system specifications and permaculture plan
- commissioned a permaculture water system
- monitored and maintained permaculture water systems.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- permaculture practices regarding water, including natural flows, rainwater and wastewater, storage, movement and retention of water in the system
- permaculture water capture systems and their access or installation, including:
 - natural water supply, including rivers, streams, ground water and springs
 - swales
 - contour banks
 - terraces
 - mulch-pit paths
 - diversion channels and other passive installations
 - low pressure or gravity systems
 - guttering and first-flush diversion system
 - wicking beds
- permaculture water storage systems, including:
 - town mains water supply
 - water table and wells
 - dams
 - tanks and bladders
- permaculture water distribution systems:
 - pumps and pumping
 - gravity and syphon systems
 - above and below ground pipes
 - channels
 - bores
 - windmill
 - mains pressure
- contours and influence on water flow, percolation and erosion
- installation methods and techniques for permaculture water storage systems
- operation of pumps and water flow rates, including friction losses in pipes
- behaviour of water on varying terrain and soil types
- water quality and water filtration techniques, including:
 - coarse contaminants and debris
 - biological contaminants

- chemical contaminants
- basic desalination techniques
- calculations for installing permaculture water systems
- soil characteristics and water retention
- water legislative and regulatory requirements, including:
 - accessing natural water systems
 - connecting to mains water
 - installing dams or diverting water in catchments
 - water use and conservation
- local government and planning acts and codes, including:
 - building regulations
 - installing tanks
 - licencing for plumbing installations to town water
- environmental and biosecurity legislation and regulations, including:
 - permits for pruning or removal of large trees
 - earth movement and digging guidelines and legislation
 - land restoration codes
 - soil movement regulations
 - habitat and wildlife protection legislation
- workplace health and safety, including:
 - licences for operating specialised machinery
 - setting up traffic and pedestrian barriers
 - overhead services
 - digging near services, including phone, gas, power, water, sewerage and drains.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a permaculture site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools, equipment and machinery for permaculture water system installation and maintenance
 - personal protective equipment
 - materials and consumables for construction and installation works
- specifications:
 - workplace procedures
 - manufacturer operating instructions for equipment and machinery
 - installation instructions for components

- plan and design specifications
- specific legislation and regulations
- relationships:
 - stakeholders
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>