



Australian Government

AHCPER405 Select appropriate technology for a permaculture system

Release: 1

AHCPER405 Select appropriate technology for a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to select appropriate technologies for permaculture systems. It includes identification, research, evaluation, selection and communication of sustainable technology for permaculture applications.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Investigate appropriate technology for permaculture systems	1.1 Review design needs and requirements for potential applications of appropriate technology 1.2 Identify relevant sources and locations of information on appropriate technology

Element	Performance criteria
	1.3 Determine required scale of appropriate technology 1.4 Identify permaculture principles and practices relevant to the appropriate technology
2. Research appropriate technology for permaculture systems	2.1 Research potential appropriate technology options for the project 2.2 Determine unique characteristics of different appropriate technology options 2.3 Research applications of alternative technologies 2.4 Research requirements for integrating new technology with existing permaculture systems 2.5 Determine capital cost of installation 2.6 Determine training and maintenance required for operation of the different options
3. Evaluate appropriate technology for permaculture systems	3.1 Evaluate potential for integrating new appropriate technologies in the permaculture system design 3.2 Compare potential alternative technologies against cost and efficiency criteria 3.3 Evaluate risks and obstacles of potential appropriate technology options
4. Select appropriate technology for permaculture systems	4.1 Select suitable appropriate technology for the design use 4.2 Determine availability of appropriate technology 4.3 Confirm cost and mode of delivery
5. Communicate appropriate technology for permaculture systems	5.1 Report on research, evaluation and selection of appropriate technology 5.2 Communicate location and detail of selected appropriate technology option on the permaculture design using appropriate drafting and drawing techniques 5.3 Explain appropriate technology and reason for selection to client

Foundation Skills

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

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124BUI05B.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER405 Select appropriate technology for a permaculture system

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Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- investigate appropriate technologies for permaculture systems
- evaluate permaculture systems capabilities in relation to the use of new technologies
- evaluate suitability of new technology solutions to the permaculture application
- communicate information and options

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and ethics
- appropriate technologies, such as:
 - technologies involving solar, wind, wood, biomass and water driven equipment for generating power, performing pumping duties, heating hot water and biochar production
 - alternative and resource conserving technologies such as rainwater collection, waste water treatment, composting toilets, cooking stoves, cob ovens, space heating and cooling, household appliances, pedal-powered appliances, enterprise plant and equipment
 - building technology such as natural and resource conserving building materials and techniques including passive solar design strategies and features
 - tools and implements employed in gardening and farming operations such as electric fencing, hand vs. power tools, shredders, mulching machines and use of animal power
 - lifestyle choices and behavioural adjustments to conserve energy and resources to meet sustainability objectives
 - smaller scale and lower cost solutions such as maintaining and riding a bicycle, using a refillable pen, using a razor with replaceable blades and substituting other non-disposable items where disposables are normally used

- low energy devices
- ingenuity applied to complex problems to develop simple solutions such as solar powered street lighting
- criteria for determining appropriateness of energy and resource conservation technologies
- principles of passive solar design, embodied energy and carbon emission reduction
- innovations in energy and resource conservation technologies
- role of appropriate technology in energy descent planning and greenhouse gas emission reduction
- types of appropriate technology systems commonly available and applied to the design of energy and resource conscious houses, farms, offices and community projects
- the benefits from combining a number of different appropriate technologies and the limitations of each different technology
- design of systems integrating appropriate technologies

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

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