



Australian Government

AHCPER509 Design permaculture structures and features

Release: 1

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Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design permaculture structures and features. It requires the ability to develop a design brief, undertake a site analysis, develop a concept design, produce a final plan and prepare bill of quantities and estimates. Designing permaculture structures and features requires knowledge of permaculture design process, construction and engineering principles, drafting techniques, cost estimating, and calculations of materials, labour, machinery and equipment.

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 broad knowledge in an area of work with depth in areas of specialisation. They undertake functions with initiative and judgement and take personal responsibility and exercise autonomy in undertaking complex work. They have accountability for the work of others (teams) within broad parameters, analyse and synthesise information as well as 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.

Element	Performance criteria
1. Develop a design brief	1.1 Consult client to establish the purpose and requirements of design 1.2 Develop design brief in agreement with the client 1.3 Negotiate cost structures and timelines with the client 1.4 Clarify and negotiate use of consultants and sub-contractors with client
2. Undertake a site analysis	2.1 Inspect site where the permaculture structure or feature is to be located 2.2 Record the physical elements and features of the site 2.3 Analyse and record assessment of soil, topography, aspect, existing vegetation and climatic factors 2.4 Assess and record other relevant information 2.5 Assess legal requirements and constraints on development
3. Develop a concept design	3.1 Prepare concept plan to illustrate location and layout of proposed structure or feature according to the design brief 3.2 Undertake consultation with the client to establish agreement on options and approaches for development 3.3 Present the concept plan in a consistent graphic style
4. Produce a final plan	4.1 Produce a detailed final plan according to the design brief 4.2 Prepare design to scale 4.3 Provide information on the plan that is relevant and precise and clearly communicates development works to be undertaken 4.4 Include notes and specifications on the plan to assist in plan interpretation 4.5 Apply appropriate construction and engineering principles to permaculture plan
5. Prepare documentation	5.1 Prepare bill of quantities listing scope and extent of works 5.2 Prepare cost estimate for the client covering items in bill of quantities, labour and machinery and equipment costs

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 QLD125DES09B

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 AHCPER509 Design permaculture structures and features

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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:

- develop a design brief
- undertake a site analysis
- develop a concept design
- produce a final plan
- prepare a bill of quantities and estimates

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture design process including:
 - site survey
 - needs analysis
 - bioregional analysis
 - zone and sector analysis
- construction and engineering principles
- drafting techniques
- cost estimating
- environmental, resource and energy implications of building materials, such as:
 - thermal mass
 - insulation
 - embodied energy
 - embedded energy
 - cradle to grave planning
 - passive heating and cooling systems

- the following alternative and natural building materials and techniques: earth, straw bale, pole construction and passive solar principles

Assessment Conditions

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

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