



Australian Government

AHCPER402 Design a rural permaculture system

Release: 1

AHCPER402 Design a rural 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 design a rural permaculture system. It requires the ability to negotiate with clients to develop a permaculture design brief, undertake a site analysis, develop design concepts and produce final design documentation.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

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. Develop a design brief for a rural permaculture system	1.1 Initiate or respond to contact with the client 1.2 Consult with the client to establish purpose, needs and requirements of design 1.3 Develop a design brief in consultation 1.4 Negotiate cost structures and timelines

Element	Performance criteria
2. Undertake design analysis	2.1 Obtain existing maps, geospatial data and aerial photographs of property 2.2 Survey area included in Zones 1, 2 and 3 using suitable survey tools and equipment 2.3 Prepare a base plan 2.4 Record site assessment data on the base plan 2.5 Carry out bioregional analysis of the site 2.6 Carry out research into potential permaculture design elements 2.7 Choose permaculture design elements 2.8 Revise brief with client in relation to completed research and analysis
3. Prepare a design concept	3.1 Evaluate and determine a permaculture system concept 3.2 Prepare conceptual design drawings to illustrate conceptual themes and patterns informing the location and layout of proposed design elements 3.3 Develop and compile a bill of quantities 3.4 Prepare a list of plant and animal species and varieties suitable for the chosen concept 3.5 Prepare a preliminary budget for the conceptual design 3.6 Present the concept plan in a graphic style 3.7 Consult the client and agree on options and approaches for design development 3.8 Review and revise concepts, elements and the design brief after taking feedback from the client
4. Produce final design	4.1 Design the rural permaculture system in accordance with the design brief, research, analysis, chosen elements and concepts 4.2 Produce detailed rural permaculture design documents 4.3 Present design plans, drawings and documents to the client 4.4 Take feedback from the client and revise or modify the design as required

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 QLD124DES02B.

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 AHCPER402 Design a rural 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:

- develop a design brief for a rural permaculture system
- draw permaculture and landscape plans
- identify rural permaculture design solutions
- develop permaculture system concepts
- develop planting schedules, budget and bills of quantity
- develop a final design
- present design to client

Knowledge Evidence

The candidate must demonstrate knowledge of:

- elements of rural permaculture design
 - representation of up to 5 zones
 - detailed representation of Zones 1 to 3
 - sector analysis
 - bioregional analysis
 - superimposing of design over commercial aerial photograph or other geospatial representation
- principles of permaculture
- strategies in rural permaculture design, such as:
 - land shaping including contour ploughing, swaling, keyline dam systems, berms and terraces
 - integrated plant and animal systems that suit the bioregion and the land
 - natural system preservation and incorporation into overall design

- soil and water preservation
- forest ecology and recharge plantings for maximum water and nutrient cycling
- innovative agricultural systems such as cell grazing, inter-cropping, commons and food forests
- preservation of old and rare breeds of animals
- biodiversity and habitat preservation and enhancement strategies
- design brief
 - statement of scope of design
 - statement of client needs and requirements
 - listing of project elements
 - listing of assessable tasks
 - options for dealing with client needs and requirements
- design analysis and research
 - investigation of permaculture books and publications, online material, audio and video material, maps, plans, charts and tables
 - searches in libraries and databases
 - viewing maps
 - searching geospatial data
 - talking to people in the local area or neighbours
- plan interpretation and map reading
- site analysis
 - initial on-site estimations of soil type, pH, texture
 - topography
 - aspect
 - zone and sectors planning
 - existing vegetation
 - climatic factors
 - indicator species or other landscape-reading notes
- site surveying methods and tools
 - surveying instruments for taking vertical measurements on site
 - surveying instruments for measuring angles on site
 - surveying instruments for measuring distance and horizontal measurements on site
- design concept, such as:
 - preliminary conceptual sketches
 - bubble diagrams
 - preliminary plan, section and elevation design drawings
 - use of design drawing and drafting conventions
 - presentable and legible design drawings for client use
- rural permaculture design
 - integration of brief requirements, analytical information and conceptual planning

- rational justification for placement of design elements
- integration of elements to produce an efficient and functional rural permaculture system
- conventional design symbols and those to convey permaculture elements
- design drafting and drawing conventions
- plant and animal selection
- final design
 - rendered plan, elevation and section drawings to scale
 - use of design drawing and drafting conventions
 - use of consistent graphic style
 - supporting legends and keys of elements
 - supporting materials lists, tables, bills of quantity, timelines, installation plans and management plans
 - construction detail drawings
- methods of design
 - zone and sector planning
 - slope planning
 - patterns in space and time

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold 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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