



Australian Government

AHCPER419 Design a rural permaculture system

Release: 1

AHCPER419 Design a rural permaculture system

Modification History

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

Application

This unit of competency describes the skills and knowledge required to negotiate with clients to develop a design brief, undertake a site assessment, develop design concepts and produce final design specifications for a rural permaculture system.

The 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 licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a design brief for a rural permaculture system	1.1 Consult with client and determine design objectives for a rural permaculture system 1.2 Determine design context 1.3 Develop and confirm design brief with client 1.4 Negotiate and confirm budget and timelines for design development

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Undertake design analysis	2.1 Access maps, images and geospatial data for site 2.2 Survey site for Zones 1, 2 and 3 for rural property, and confirm or supplement information of maps and images 2.3 Prepare a site base plan 2.4 Record site survey data on base plan 2.5 Conduct a bioregional analysis for site 2.6 Identify potential permaculture design elements suitable for design brief outcomes 2.7 Assess and select permaculture design elements according to design brief 2.8 Revise and confirm design elements with client
3. Prepare a design concept	3.1 Determine and evaluate a concept for a rural permaculture system 3.2 Prepare concept design drawings 3.3 Identify and document plant and livestock suitable for concept design in a rural setting 3.4 Develop and compile a bill of materials and cost estimates for design elements, plants and livestock 3.5 Prepare a preliminary budget for design concept 3.6 Present concept plan and budget to client for feedback and approval 3.7 Review concept plan and budget according to client feedback
4. Produce final design	4.1 Design rural permaculture system according to design brief and approved concept plan and budget 4.2 Produce drawings and specifications for rural permaculture system design 4.3 Present design plans, drawings and specifications to client for final feedback and approval 4.4 Undertake final revision changes for design according to client feedback and approvals 4.5 Finalise and record design according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Analyse plans and other documentation from a variety of sources, and consolidate information to determine permaculture system requirements and client needs
Writing	Prepare and produce client briefs and plans and specifications, including diagrammatic models and plans, to illustrate complex permaculture design principles and requirements
Oral communication	Use collaborative and inclusive techniques, including active listening and questioning and reading of verbal and non-verbal signals, to convey, clarify and confirm client requirements
Numeracy	Apply financial modelling skills to identify, analyse and evaluate budgetary information, time durations and resource allocations for permaculture system design

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPER419 Design a rural permaculture system	AHCPER402 Design a rural permaculture system	Minor changes to Application, Elements and Performance Criteria for clarity Changes to Performance Evidence, Knowledge Evidence and Assessment Conditions for clarity Addition of Foundation Skills	Equivalent

Links

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

Assessment Requirements for AHCPER419 Design a rural permaculture system

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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, on at least one occasion, designed a permaculture system for a rural property, including:

- consulted and negotiated with client to develop a design brief for a rural permaculture system
- developed concepts and sought feedback and approval from client for a rural permaculture system design
- developed the concept, which must include:
 - analysed zones and sectors relevant to a rural permaculture system design
 - designed elements suitable to a rural property
 - identified and recommended plants and animals suitable for inclusion in a rural environment
 - calculated materials and cost estimates for the concept.

There must also be evidence that the individual has:

- prepared landscape drawings and plans for design, which must include:
 - detail and construction drawings
 - developed planting schedules, budget and specifications
 - developed a final design
- presented a design to client and finalised workplace design procedures.

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:

- elements of rural permaculture design, including:

- representation of 5 zones
- sector analysis
- bioregional analysis
- use of commercial aerial photograph or other geospatial representation on design
- principles and practices of permaculture
- strategies in rural permaculture design, including:
 - land shaping, including contour ploughing, swaling, key points, dam systems, berms and terraces
 - integrated plant and animal systems that suit the bioregion and environmental conditions
 - 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
- contents of a design brief, including:
 - 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 books and publications, online material, audio and video material, maps, plans, charts and tables
 - searching geospatial data
 - interviewing local community
- plan interpretation and map reading
- site analysis, including:
 - initial on-site assessment of soil type, pH, texture
 - topography
 - aspect
 - zone and sectors analysis
 - existing vegetation
 - climatic factors
 - indicator species or other landscape-reading notes
- site surveying methods and tools, including:
 - vertical measurements
 - measuring angles

- measuring distance and horizontal measurements
- design concept and methodology, including:
 - preliminary conceptual sketches
 - bubble diagrams
 - preliminary plan, section and elevation design drawings
 - use of design drawing and drafting conventions
 - presentable and legible design drawings
- rural permaculture design principles, including:
 - 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
- drawing conventions for design symbols and those used to convey permaculture elements
- design drafting and drawing conventions
- plant and animal selection
- final design and components, including:
 - rendered plan, elevation and section drawings to scale
 - consistent graphic style
 - legends and keys of elements
 - 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

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

- physical conditions:
 - skills must be demonstrated in a rural environment or an environment that accurately represents rural conditions
- resources, equipment and materials:
 - survey tools and equipment
 - permaculture reference materials
 - drawing equipment and resources
- specifications:
 - workplace procedures
 - workplace client brief

- relationships:
 - client.

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

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