



Australian Government

AHCPER514 Design an integrated permaculture system

Release: 1

AHCPER514 Design an integrated 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 design integrated permaculture systems in a range of contexts, including developing a design brief, undertaking a site analysis, developing conceptual designs and producing a final design drawing and specifications.

The unit applies to individuals who apply specialised skills and knowledge, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

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 an integrated permaculture system design brief	1.1 Consult with client and determine design objectives 1.2 Determine design context 1.3 Develop and confirm design brief with client 1.4 Negotiate cost structures and timelines

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Document cost structure and budget
2. Undertake analysis and prepare base plan for design	2.1 Access maps, images and geospatial data for site 2.2 Conduct site survey for design 2.3 Include all permaculture Zones in survey area 2.4 Prepare a base plan 2.5 Source and assess social research data 2.6 Undertake field research for design contexts according to design brief 2.7 Analyse site and bioregion of local area 2.8 Record site analysis outcomes on base plan
3. Interpret site for an integrated permaculture system design	3.1 Research permaculture elements and assess suitability for design 3.2 Identify functional interconnections between elements to increase yield and minimise resource use 3.3 Select permaculture design elements according to research outcomes 3.4 Coordinate design development with other stakeholders involved with project 3.5 Identify regulatory and compliance requirements affecting design elements 3.6 Revise brief with client according to outcomes of research and analysis
4. Prepare design concepts	4.1 Identify viable design concepts to achieve brief objectives 4.2 Prepare concept design drawings according to industry standards 4.3 Identify and document materials required for design concept 4.4 Compile list of plant and animal species and varieties suitable for chosen concepts 4.5 Prepare a preliminary budget for conceptual design
5. Review design concept with client for approval	5.1 Review the concepts against permaculture principles and ethics 5.2 Prepare presentations of draft design concept options for client 5.3 Present options and approaches for design to client and seek feedback

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.4 Review and revise design brief from feedback and secure approval from client
6. Produce final design and report for an integrated permaculture system	6.1 Design integrated permaculture system according to design brief 6.2 Document permaculture design according to industry standards 6.3 Present plans, drawings and documents for integrated permaculture system design to client 6.4 Seek final approval from client 6.5 Finalise and record design process 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
Writing	Prepare and produce client brief, plans and specifications, including diagrammatic models and diagrams, 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 negotiate, convey, clarify and confirm client requirements for design
Numeracy	Apply financial modelling skills to identify, analyse and evaluate budgetary information, time durations and resource allocations for integrated permaculture system design

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPER514 Design an integrated	AHCPER502 Design an integrated	Minor changes to	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
permaculture system	permaculture system	Application Minor changes to Elements for clarity Changes to sequencing of Performance Criteria for clarity and brevity Merged research content from deleted unit AHCPER507 Research and interpret requirements for a permaculture project	
AHCPER514 Design an integrated permaculture system	AHCPER507 Research and interpret requirements for a permaculture project	Minor changes to Application Minor changes to Elements for clarity Changes to sequencing of Performance Criteria for clarity and brevity Merged research content from deleted unit AHCPER507 Research and interpret requirements for a permaculture project	Not 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 AHCPER514 Design an integrated 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 designed an integrated permaculture system for at least two (2) sites, which must include:

- a rural environment
- an urban environment.

There must also be evidence that for each design the individual has:

- developed a design brief with a client, which must include:
 - design scope and objectives
 - design context
 - cost structure
 - timelines
- conducted a site analysis and site survey
- prepared a base plan for design development
- provided design solutions for both urban and rural permaculture systems
- analysed permaculture zones and sectors of a site
- developed concept design, which must include:
 - conceptual themes and patterns
 - location and layout of proposed design elements
- developed planting schedules and bills of quantity
- developed a design budget
- developed final design drawings, including elevations and projections, using industry recognised drafting and drawing techniques.

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:

- principles and elements of integrated permaculture design, including climate change science and mitigation strategies
- strategies for urban and rural permaculture design
- legislative and regulatory requirements of design elements
- strategies for community settlement development and working with planning authorities
- design brief elements, including:
 - scope and objectives of design
 - client needs and requirements
 - project elements
 - assessable tasks
- social and community research and development
- structures and features required for design, and identifying the needs for building permits
- design analysis and research techniques
- plan interpretation and map reading
- site surveying methods and tools, including:
 - measurement and mapping of site boundaries
 - mapping of contour lines
 - location of existing infrastructure and natural features
 - use of surveying instruments
 - digital survey technologies
 - linear measuring devices
- design concepts and detailed design drawing elements, including:
 - client details and site location
 - property boundaries, scale and north point
 - authors of plans, contact details
 - address of site
 - date plan drawn
 - existing infrastructure and natural features
 - drawing scale
 - relevant overlays and drawing numbers
 - plan size and format
 - overlays, including fire, flora and fauna, soil and geology, local planning ordinances, buffer and riparian zones, use zones, cultural and heritage zones
 - indicators of gradient and contour lines, including drainage features
- permaculture design methods
- conventional design symbols
- design drafting, drawing conventions and drafting technologies
- plant and animal selection.

Assessment Conditions

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

- physical conditions:
 - skills must be demonstrated for a site suitable for an integrated permaculture system or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - drawing tools and permaculture system equipment
 - research material
- specifications:
 - workplace policies, procedures, processes
 - client brief
 - specific legislation and codes of practice
- relationships:
 - client
 - stakeholders.

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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