



Australian Government

AHCDES508 Design sustainable landscapes

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to design sustainable landscapes, including assessing requirements for sustainable land use, preparing an integrated design, planning implementation into design, and auditing implementation for improvement of long-term ecological sustainability of landscapes.

The unit applies to individuals who apply specialist skills and knowledge to design sustainable landscapes, 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.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

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

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

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. Assess requirements for sustainable land use	1.1 Consult with client to discuss purpose and requirements of design and create brief establishing specific sustainability requirements for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	design 1.2 Research and identify legislative and regulatory requirements and document in improvement plan 1.3 Identify specific requirements for sustainability from business plan or documentation 1.4 Assess land area for biophysical factors, biodiversity, historical, heritage and cultural attributes, services, site modifications and threats to sustainability 1.5 Identify environmental implications of range of landscape works and research, identify and report to relevant personnel with recommendations
2. Prepare an integrated design to improve land use	2.1 Develop concept plan for improvement that reflects client preferences and requirements, heritage issues, site factors and any identified environmental requirements 2.2 Present concept plan to client or landowner for discussion and approval 2.3 Research, report and reference specific technical documents or reports regarding energy efficiency and use, current and developing technologies and legislative and workplace requirements 2.4 Consider design of products, materials and finishes that are efficient, low risk and cyclic and confirm availability from local source 2.5 Evaluate impact of resources, materials, equipment and machinery required for works on sustainable use of site 2.6 Select plants and soils or soil ameliorant techniques for their integrated roles for designed outcomes in specific site conditions, system of irrigation and environmental parameters 2.7 Review environmental conditions for functional analysis of site and planned design 2.8 Prepare detailed plan or design 2.9 Present plan or design to client or landowner for acceptance
3. Plan the implementation into the design	3.1 Outline staged implementation and development including site access 3.2 Incorporate timelines for development according to implementation plan and principles of sustainability

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.3 Determine schedules for planting and post-planting care according to requirements of plant species, site conditions and planning requirements 3.4 Integrate protection of water resources, riparian zones or storm water drainage systems (SUDS), specified trees and existing vegetation into design plan 3.5 Review chemical, non-chemical, ameliorant application and waste disposal procedures and processes to select designs of minimal environmental consequence and potential contamination of soils and ground water 3.6 Review implementation outline for integration of approach to land and water management
4. Audit the implementation of sustainable practices	4.1 Monitor use of work materials, waste and debris from site works for low risk energy sustainable methods 4.2 Sample and test soil and ground water quality where applicable to site and implement recommendations 4.3 Confirm soil conservation measures and erosion sediment controls during construction and project life according to Environmental Protection Authority (EPA) legislation 4.4 Verify protection measures for specified trees, protected flora and fauna and areas and objects of cultural significance 4.5 Maintain or improve biodiversity, heritage, cultural and historical attributes, soil and water quality 4.6 Present report to client according to design brief and contractual requirements

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	Identify and interpret information regarding legislative and regulatory requirements, and specific requirements for sustainability

Skill	Description
Oral communication	Initiate discussions with client, using clear language to discuss and establish design purpose, finalise design brief and present plan or design

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES508 Design sustainable landscapes	AHCDES501 Design sustainable landscapes	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	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 AHCDES508 Design sustainable landscapes

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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 sustainable landscapes on at least one occasion, and has:

- consulted with clients
- developed a design brief in consultation with client to establish design purpose and requirements
- researched, interpreted and applied legislation and regulations relevant to sustainable landscape design
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- assessed land area for sustainable use
- designed for the health and sustainability of soils and plants
- interpreted specifications and plans
- selected plants and soils for their integrated functional roles
- used graphic techniques for illustrating landscape design components
- prepared a detailed plan or design for sustainable land improvement
- implemented sustainable practices
- outlined an integrated approach to land and water management
- designed for integrated protection of water resources, riparian zones or storm water drainage systems (SUDS) and vegetation in a development area
- assessed soil and water quality tests where applicable to site
- applied relevant Environmental Protection Authority (EPA) legislation.

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:

- legislation and regulations relevant to sustainable landscape design

- workplace health and safety and environmental and biosecurity legislation and regulations and workplace procedures relevant to sustainable landscape design
- EPA legislation relevant to sustainable landscape design
- principles and practices of designing sustainable landscapes, including:
 - sustainable landscape design principles
 - assessment techniques
 - environmental controls and codes of practice applicable to the business and to the improvement works
 - biophysical factors, biodiversity, historical, heritage and cultural attributes, services, site modifications and threats to sustainability
 - botany, plant physiology, taxonomy and nomenclature
 - identification and selection of soils, growing media, plants, shrubs and trees
 - irrigation practices
 - legislation and regulations relating to soil and water degradation issues and construction
 - surface and subsurface hydrology
 - storm water drainage systems (SUDS)
 - sustainable land and water use principles and practices applicable in the region
 - types, properties and characteristics of a wide range of soils, soil amelioration techniques and growing media.

Assessment Conditions

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

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - landscape site
 - site information, documentation and data applicable to sustainable landscape design
- specifications:
 - legislation and regulations relating to soil and water degradation issues and construction, and sustainable landscape design
 - workplace health and safety and environmental and biosecurity legislation and regulations and workplace procedures applicable to sustainable landscape design
 - EPA legislation applicable to sustainable landscape design
- relationships:
 - clients
- timeframes:
 - according to job requirements.

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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