

## Modification history

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

AHCDES501	Design sustainable landscapes
<b>Application</b>	<p>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, land under production, land areas in business use, natural resource areas and recreational amenity spaces.</p> <p>The unit applies to individuals who apply specialist skills and knowledge to surveying and establishing site levels, 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.</p> <p>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.</p> <p>No licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	Design (DES)

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 the purpose and requirements of the design and establish a brief for the design 1.2 Research and identify legislative and regulatory requirements and document in the improvement plan 1.3 Identify specific requirements for sustainability from the brief, business plan, management plan or policy documentation 1.4 Assess the land area for its biophysical factors, biodiversity, historical, heritage and cultural attributes, services, site modifications and threats to sustainability 1.5 Identify environmental implications of the planned works and, if necessary, report to relevant personnel for further research and recommendations

<b>Elements</b>	<b>Performance Criteria</b>
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Prepare an integrated design to improve land use	2.1 Develop a 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 the client or landowner for discussion and approval 2.3 Consult other professionals to assist in research and planning of works in areas of specific technical expertise, 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 a local source 2.5 Evaluate the impact of resources, materials, equipment and machinery required for the works on the sustainable use of the site 2.6 Select plants and soils for their integrated roles for the designed outcomes in the specific site conditions, system of irrigation and environmental parameters 2.7 Review environmental conditions for a functional analysis of the site and the planned design 2.8 Prepare a detailed plan or design 2.9 Present plan or design to the 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 3.3 Determine schedules for planting and post-planting care according to the requirements of the plant species, site conditions and planning requirements 3.4 Integrate protection of water resources, riparian zones, 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 the use of work materials, waste and debris from site works have low risk and energy sustainable methods 4.2 Sample and test soil and ground water quality and implement recommendations 4.3 Confirm soil conservation measures and erosion sediment controls 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

<b>Foundation Skills</b>	
<i>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.</i>	
<b>Skill</b>	<b>Description</b>
Reading	<ul style="list-style-type: none"> <li>Identify and interpret information regarding legislative and regulatory requirements, and specific requirements for sustainability</li> </ul>
Oral communication	<ul style="list-style-type: none"> <li>Initiate discussions with client, using clear language to discuss and establish design purpose, finalise design brief and present plan or design</li> </ul>

<b>Unit Mapping Information</b>			
<b>Code and title current version</b>	<b>Code and title previous version</b>	<b>Comments</b>	<b>Equivalence status</b>
AHCDES501 Design sustainable landscapes Release 2	AHCDES501 Design sustainable landscapes Release 1	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72">https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72</a>
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<b>TITLE</b>	<b>Assessment requirements for AHCDES501 Design sustainable landscapes</b>
<b>Performance Evidence</b>	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has designed sustainable landscapes on at least one occasion, and has:</p> <ul style="list-style-type: none"> <li>• developed a design brief in consultation with client to establish design purpose and requirements</li> <li>• researched, interpreted and applied legislation and regulations relevant to sustainable landscape design</li> <li>• applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures</li> <li>• assessed land area for sustainable use</li> <li>• assessed soil and water quality tests</li> <li>• designed for the health and sustainability of soils and plants</li> <li>• implemented sustainable practices</li> <li>• interpreted specifications and plans</li> <li>• outlined an integrated approach to land and water management</li> <li>• prepared a detailed plan or design, specifications for sustainable land improvement</li> <li>• consulted with clients</li> <li>• designed for integrated protection of water resources, riparian zones and vegetation in a development area</li> <li>• selected plants and soils for their integrated functional roles</li> <li>• used graphic techniques for illustrating landscape design components.</li> </ul>	

<b>Knowledge Evidence</b>	
<p>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:</p> <ul style="list-style-type: none"> <li>• principles and practices of designing sustainable landscapes, including: <ul style="list-style-type: none"> <li>• sustainable landscape design principles</li> <li>• assessment techniques</li> <li>• environmental controls and codes of practice applicable to the business and to the improvement works</li> <li>• biophysical factors, biodiversity, historical, heritage and cultural attributes, services, site modifications and threats to sustainability</li> <li>• botany, plant physiology, taxonomy and nomenclature</li> <li>• identification and selection of soils, growing media, plants, shrubs and trees</li> <li>• irrigation practices</li> <li>• legislation and regulations relating to soil and water degradation issues and construction</li> <li>• surface and subsurface hydrology</li> <li>• sustainable land and water use principles and practices applicable in the region</li> <li>• types, properties and characteristics of a wide range of soils and growing media</li> </ul> </li> <li>• legislation and regulations relevant to sustainable landscape design</li> <li>• workplace health and safety and environmental and biosecurity legislation and regulations and workplace procedures relevant to sustainable landscape design.</li> </ul>	

<b>Assessment Conditions</b>	
<p>Assessment of the skills in this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> <li>• physical conditions: <ul style="list-style-type: none"> <li>• a workplace setting or an environment that accurately represents workplace conditions</li> </ul> </li> <li>• resources, equipment and materials: <ul style="list-style-type: none"> <li>• landscape site</li> <li>• site information, documentation and data applicable to sustainable landscape design</li> </ul> </li> <li>• specifications: <ul style="list-style-type: none"> <li>• legislation and regulations relating to soil and water degradation issues and construction, and sustainable landscape design</li> </ul> </li> </ul>	

<b>Assessment Conditions</b>	
<ul style="list-style-type: none"><li>• workplace health and safety and environmental and biosecurity legislation and regulations and workplace procedures applicable to sustainable landscape design</li><li>• relationships:<ul style="list-style-type: none"><li>• clients</li></ul></li><li>• timeframes:<ul style="list-style-type: none"><li>• according to job requirements.</li></ul></li></ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
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