



Australian Government

AHCSOL407 Develop a soil use map for a property

Release: 1

AHCSOL407 Develop a soil use map for a property

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to collect information for soil mapping, analyse soil information and develop a soil use map for a property.

The unit applies to individuals who apply specialist skills and knowledge to developing a soil use map for a property. This includes applying and communicating non-routine technical solutions to predictable and unpredictable 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

Soils and Media (SOL)

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. Collect information for soil mapping	1.1 Confirm soil samples for off-site assessment were collected according to testing agency requirements 1.2 Collect soil physical, chemical and biological information 1.3 Determine, from published data and records, the acceptable soil

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	physical and chemical parameters for specified plants 1.4 Collect information on areas of cultural significance and habitats of biodiversity on the property 1.5 Collate and record research results
2. Analyse soil information	2.1 Classify the soil types of the sample area according to standards for soil classification 2.2 Compare collected results with acceptable parameters for land use and production 2.3 Evaluate soil characteristics to determine whether they can be altered to meet land use needs 2.4 Determine the Readily Available Water (RAW) values for irrigation sites
3. Plot topography and soil survey data on property map	3.1 Interpret results from analysed data and add to property map 3.2 Identify potential uses of the soil for purposes of land classing, land capability, areas of cultural significance and habitats of biodiversity 3.3 Define property boundaries and features 3.4 Identify paddocks or irrigation areas 3.5 Plot contour or spot level information 3.6 Plot soil sampling sites on map 3.7 Determine soil profile and irrigation characteristics for each sampling site and irrigation area, and index to the map 3.8 Index RAW values for irrigation sites 3.9 Plot areas of specific concern on the map, and index descriptions to the map

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
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Skill	Description
Reading	Identify and interpret textual information regarding testing agency requirements, areas of cultural significance, habitats of biodiversity and standards for soil classification
Numeracy	- Interpret and compare numerical information from published data and records with analytical results to determine acceptable parameters for land use and production for specified plants - Calculate and index RAW values for irrigation sites

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL407 Develop a soil use map for a property	AHCSOL402 Develop a soil use map for a property	Performance criteria clarified 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 AHCSOL407 Develop a soil use map for a property

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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 developed a soil use map for a property on at least one occasion, and has:

- confirmed soil samples were collected according to testing agency requirements
- determined soil characteristics and parameters
- interpreted and compared published data and records with analytic results
- determined areas of cultural significance and habitats of biodiversity on the property
- interpreted soil analysis test results
- determined RAW values for irrigation sites, and indexed on property map
- plotted topography, soil survey data and areas of concern on property map.

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:

- testing agency requirements applicable to sampling soils
- principles and practices for developing soil use maps, including:
 - environmental impacts of irrigation, using water from any ground or underground source
 - methods and techniques of soil sampling
 - nutrient availability in soils
 - physical and chemical properties of soils
 - readily available water
 - soil analyses results
 - soil quality factors
 - soil types and profiles
 - soil water retention testing techniques

- water table and salinity.

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:
 - soil sampling test results
 - information on areas of cultural significance and habitats of biodiversity on the property
 - principles and practices for developing soil use maps
- specifications:
 - testing agency requirements applicable to soil sampling
- 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.

Links

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