



Australian Government

Department of Education, Employment and Workplace Relations

AHCSOL302A Construct a soil profile

Release: 1

AHCSOL302A Construct a soil profile

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of constructing soil profiles and defines the standard required to: determine construction requirements from plans; survey and create working plans for construction sites; excavate earthworks and establish working and finished levels; install drainage and sub-surface irrigation components; install sustainable soils and growing media; implement a construction project.
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Application of the Unit

Application of the unit	This unit applies to the construction of new soil profiles in residential, commercial and public recreational open space development and residential and rural property development in new projects and in the complete renovation of existing soil profiles in urban and regional areas.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Survey the construction site	1.1. Surveying equipment is set up and used according to industry standards. 1.2. Existing levels are surveyed and temporary benchmark established. Details are recorded accurately and legibly according to industry standards. 1.3. New levels are set according to specifications and pegs placed according to industry convention. 1.4. Contour map with reduced levels and a cross section is developed and drawn using accepted industry symbols and mapping conventions.
2. Prepare for construction work	2.1. Enterprise work team, contractors and design consultants are identified and, where required, engaged. 2.2. Work tasks are scheduled in a logical, timely and effective manner in consultation with the supervisor. 2.3. Materials required are estimated and costed according to accepted industry practice and ordered. 2.4. Plans for the new construction profile are obtained or developed.
3. Set out site for construction	3.1. Soil profile construction requiring set out.
4. Excavate the construction site	4.1. Excess soil is removed and the construction site cleared with the stockpile being placed in a designated area according to enterprise work procedures. 4.2. The base is graded to the level and slope specified in the base design. 4.3. The base of the profile is prepared over the entire site according to the construction plan. 4.4. Sub-surface irrigation system components and fittings are installed to the required depth and design specified in the construction plan. 4.5. Install drainage system.
5. Install soil profile	5.1. Quantities of material required are calculated and measured according to the construction plan. 5.2. Soils and growing media are selected for sustainable use and according to the construction plan. 5.3. Each profile layer is installed and compacted to reflect the final contour. 5.4. The interface between profile layers is uniform and

ELEMENT	PERFORMANCE CRITERIA
	unbroken according to the construction plan. 5.5. Soil amendments are prepared and implemented. 5.6. The finishing soil surface is given a final levelling and consolidated, ready for planting, according to the construction plan and enterprise work procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- draft basic working plans
- survey site levels and dimensions
- install drainage and irrigation systems
- measure materials, interpret, survey and assess site measurements, and interpret and apply test results
- coordinate work group, contractors and own activities to sequentially and effectively complete construction in a timely and cost effective manner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- practical understanding of the range and use of materials, tools, equipment and machinery available for construction of soil profiles, including soil amendments and base construction materials
- soil and growing media types suitable for sustainable landscapes
- practical understanding of the range of construction methods that may be used to construct soil profiles and the association of construction methods with site limitations, environmental implications, and end use of the site
- practical understanding of surveying principles and techniques
- soil testing techniques and the application of results to the construction process

REQUIRED SKILLS AND KNOWLEDGE

- awareness of the comparative environmental implications associated with construction and excavation activity, drainage and irrigations systems, soil amendments and waste disposal procedures
- AS4419-2003 and AS4454-2003.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: • determine construction requirements from plans • survey and create working plans for construction sites • excavate earthworks and establish working and finished levels • install drainage and sub-surface irrigation components • install sustainable soils and growing media • implement a construction project.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Constructing profiles may include:	• construction sites • landscaping sites • land developments • farms • land management operations • restoration projects.

RANGE STATEMENT

	This standard does not cover high performance turf sporting surface constructions.
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Unit Sector(s)

Unit sector	Soils and media
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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