



Australian Government

Department of Education, Employment and Workplace Relations

AHCSAW501A Design control measures and structures

Release: 1

AHCSAW501A Design control measures and structures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers work functions associated with the formal engineering design of erosion and sediment control measures and structures including farm dams on land disturbing projects in both urban and rural environments and defines the standard required to: identify measures to be designed; apply design procedures; prepare specification schedule; cost and provide recommendations; collaborate with planner.
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Application of the Unit

Application of the unit	This unit is likely to be carried out independently within enterprise guidelines.
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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. Identify measures to be designed	1.1. Plan or strategy is reviewed for technical accuracy and environmental impacts. 1.2. Adherence to regulations and legislation is confirmed and noted on works plans. 1.3. Design criteria are applied in line with industry standards.
2. Apply design procedures	2.1. Catchment characteristics are calculated to required accuracy in line with industry standards. 2.2. Methods to determine design specifications are in accordance with industry standards. 2.3. Measures are modified in response to applying design procedures and follow accepted industry practices.
3. Prepare specification schedule	3.1. Documentation provided aligns with the plan and follows industry standards. 3.2. Suitability of design specifications are confirmed to comply with the category of work.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- identify measures to be designed
- apply design procedures
- prepare specification schedule
- cost and provide recommendations
- use computer design programs
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

REQUIRED SKILLS AND KNOWLEDGE

abilities.

Required knowledge

- relevant Occupational Health and Safety (OHS) environmental, planning and groundwater legislation.
- erosion control and design principles
- soils and soil formation
- levels and levelling
- earthmoving principles
- total catchment issues
- legal requirements - permits
- environmental issues
- managing peak water flows
- subsurface and surface drainage principles and systems
- awareness of the limitations of design aids provided for industry.

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:

- identify measures to be designed
- apply design procedures
- prepare specification schedule
- cost and provide recommendations
- collaborate with planner.

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.

Erosion control measures may include:

- site management
- land shaping
- batter stabilisation
- banks and channels
- level spreader
- revegetation
- waterways
- check dams
- bank and channel linings
- grade stabilising structures
- outlet protection structures

RANGE STATEMENT	
	• stormwater detention measures • dust control • rural road&track crossbank and crossfall.
Sediment control measures may include:	• sediment basins • sediment traps • sediment filters • excavated sediment traps • straw bale • stormwater inlet sediment traps • sediment fence • straw bale • geotextile fabric and vegetation strips.

Unit Sector(s)

Unit sector	Soil and water conservation
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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