



Australian Government

Department of Education, Employment and Workplace Relations

AHCDRG301A Install drainage systems

Release: 1

AHCDRG301A Install drainage systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of installing surface and/or subsurface drainage systems and defines the standard required to: interpret site specifications and drainage system plans; prepare for installation activities; set out, survey, test and excavate the installation site; measure materials; set out drainage system works; install and test the drainage system; level and align earthworks.
------------------------	---

Application of the Unit

Application of the unit	This unit applies to workers in land conservation and irrigation construction and is likely to be carried out under routine supervision within enterprise guidelines.
--------------------------------	---

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
-----------------------------	--

Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for drainage system installation activities	<p>1.1. The construction site for the drainage system and construction method is identified according to the site and drainage system plans and enterprise work procedures.</p> <p>1.2. Materials, tools, equipment and machinery are selected according to drainage system design requirements and enterprise work procedures.</p> <p>1.3. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer's specifications and enterprise work procedures.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls implemented.</p> <p>1.5. Suitable safety and Personal Protective Equipment (PPE) are selected, used and maintained.</p>
2. Co-ordinate installation work	<p>2.1. Enterprise work team, contractors and design consultants are identified and work tasks are co-ordinated in a sequential, timely and effective manner in consultation with the supervisor.</p> <p>2.2. Installation of the drainage system is undertaken according to OHS requirements and with due consideration of the environmental implications and relevant legislation and regulations.</p> <p>2.3. A clean and safe work area is maintained throughout and on completion of work.</p>
3. Prepare the site for installation of drainage system	<p>3.1. Symbols and terminology are interpreted to ensure the concept of the drainage system plan is clearly understood according to industry practice.</p> <p>3.2. Layout of services is identified, depths checked against the site or drainage system plan and discrepancies are reported to the supervisor and the relevant authority.</p> <p>3.3. Survey, measurement and marking out of the site and confirmation of soil characteristics relevant to the planned drainage system are completed according to plan specifications and enterprise work procedures.</p>
4. Undertake installation of drainage system	<p>4.1. Excavations are completed without damage to services, facilities, features and established plants according to plan specifications and enterprise work procedures.</p> <p>4.2. The drainage system is installed according to the</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>drainage system plan and enterprise work procedures.</p> <p>4.3. The drainage system is tested for configuration, flow rates and capacity consistent with the drainage system plan and according to enterprise work procedures.</p> <p>4.4. The supervisor is consulted and remedial action is taken when the drainage system operation does not meet the plan specifications.</p>
5. Complete installation of drainage system	<p>5.1. Earthworks are finished off to the plan specifications and enterprise work procedures.</p> <p>5.2. The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p> <p>5.3. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p> <p>5.4. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- identify hazards and implement safe work procedures
- set out drainage system works
- level and align earthworks
- use equipment, tools and machinery
- implement and follow relevant enterprise OHS and environmental policies and procedures
- 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

REQUIRED SKILLS AND KNOWLEDGE

- 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

- the purposes of drainage systems and the application of drainage system plans to the physical situation
- drain types, components and installation techniques
- environmental impacts of irrigation and drainage systems
- soil characteristics
- enterprise OHS procedures
- environmental impacts of installing drainage systems.

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:

- interpret site specifications and drainage system plans
- prepare for installation activities
- set out, survey, test and excavate the installation site
- measure materials
- set out drainage system works
- install and test the drainage system
- level and align earthworks.

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.

Drainage systems may include:

- surface drains
- culverts
- mole drains
- sand slit
- sub-surface traps
- pit and trap systems
- dune and swale systems
- reed beds
- water-recycling pumps and baffles.

Unit Sector(s)

Unit sector	Drainage
--------------------	----------

Co-requisite units

Co-requisite units		

Competency field

Competency field	
-------------------------	--