



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **AHCIRG427A Plan and supervise on-site irrigation system installation and construction work**

Release: 1

## **AHCIRG427A Plan and supervise on-site irrigation system installation and construction work**

### **Modification History**

Not applicable.

### **Unit Descriptor**

This Unit covers planning and supervising on-site irrigation system installations and construction work and defines the standard required to: identify operational requirements from contract documentation; develop a project plan with tasks, responsibilities, timelines and costs; organise the installation of supplies and equipment; implement and monitor on site operations; test the installation or construction against specifications; and monitor budgets and maintain documentation.

### **Application of the Unit**

This Unit applies to irrigation installation project managers who work in the irrigation servicing, amenity horticulture and food and fibre production industries.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

This Unit contains employability skills.

### **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Appraise contract documentation and determine operational requirements	1.1 Copy of building approval and conditions is obtained as required 1.2 Contract documentation is reviewed for any unusual aspects of construction, use of materials and penalties 1.3 Availability of sub-contractors is ascertained and selected to suit job requirements 1.4 Availability of materials is checked with suppliers 1.5 Site access limitations are assessed 1.6 Relevant authorities controlling construction work advised of commencement date for project as required 1.7 Procedures are developed for site deliveries, plant hire and hazard to the environment
2 Prepare project schedule for <i>irrigation system</i> installation and construction	2.1 Construction operations are prepared in sequence 2.2 Operations are entered into a manually prepared schedule or computer based software package 2.3 'Critical path' is identified and schedule revised with new activities/projects, as needed, and documented 2.4 Timeframe is adjusted to take account of anticipated delays
3 Determine all the required resources for project	3.1 Temporary services and site accommodation is determined as required 3.2 Plant requirements and dates are selected and accessed 3.3 On site labour requirements are determined 3.4 A dilapidation report is made of the condition of existing plant and structures
4 Implement and monitor Occupational Health and Safety (OHS) and risk management procedures	4.1 First aid facilities are established as necessary 4.2 Plant and equipment requiring certificated operators are identified to comply with risk management procedures 4.3 Likely hazards are identified and precautions taken 4.4 Role of Construction Safety Supervisor is identified 4.5 Documentation for safety reporting is instigated
5 Organise the installation of materials and equipment	5.1 Material orders are placed according to appropriate schedule 5.2 Equipment is hired according to planned schedule 5.3 Maintenance procedures are established for equipment
6 Supervise on-site operations	6.1 Operations are implemented according to appropriate schedule and contract 6.2 Sub-contractor operations are co-ordinated and monitored, including all aspects of materials used and standards of workmanship 6.3 Problems and delays are addressed as they arise and action recorded 6.4 Industrial relations are monitored continuously and issues resolved to minimise impact on job progress

- 6.5 Revisions are made to project schedule, when required, and variations documented to comply with quality management procedures
  - 6.6 Quality management procedures are applied continuously as per adopted standards for job
  - 6.7 Safety procedures are monitored continuously, reports analysed and procedures reviewed as required
  - 6.8 Reports on current project status are prepared for management
- 7 Monitor budget and comply with employment requirements
    - 7.1 Summary records are prepared for progress claims
    - 7.2 Actual expenditure and earnings are checked against scheduled projected costs
    - 7.3 Employment records are maintained

## Required Skills and Knowledge

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

### Required skills include:

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#### Ability to:

- place and check orders for materials
- negotiate start dates and manage resources to minimise delays and down-time
- notify client, authorities and agencies of the schedule of works
- comply with requirements of statutory authorities and agencies
- develop strategies
- schedule project tasks and timelines
- determine resources
- place and check orders for materials
- organise delivery of site accommodation
- organise delivery of plant
- organise delivery of components
- take delivery materials and arrange checks
- arrange connection of temporary services
- organise on-site labour
- analyse contract conditions
- develop a project schedule to:
  - administer the contract on site
  - supervise construction operations in the most efficient sequence
  - monitor the delivery of materials and equipment to meet schedule
  - monitor tasks and manage resources to minimise delays and down-time
  - monitor project resources, including budget
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- manage contingencies
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- develop and implement relevant enterprise OHS and environmental procedures
- incorporate legislative and enterprise OHS and environmental procedures into planning
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- 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 routine and more complex workplace measures and data

- 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 abilities.

### **Required knowledge includes:**

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#### **Knowledge of:**

- installation and construction processes for on-site irrigation systems
- logical construction sequence for the system
- analysis of the required project resources
- labour hiring requirements and procedures
- communication procedures for on-site labour and authorities
- safety procedures and quality assurance programs
- state legislation and local government requirements for irrigation installation
- on-site contract provisions
- projected costs
- local government regulations
- labour hiring requirements and procedures
- relevant Australian Standards (e.g. AS3500)
- effect of main soil types on approach to excavation work and installation of irrigation components
- environmental impacts of irrigation activities and appropriate remedial/preventative action
- OHS and environmental procedures.

## Evidence Guide

<p>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.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>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:</p> <ul style="list-style-type: none"> <li>• identify operational requirements from contract documentation</li> <li>• develop a project plan with tasks, responsibilities, timelines and costs</li> <li>• organise the installation of supplies and equipment</li> <li>• implement and monitor on site operations</li> <li>• test the installation or construction against specifications</li> <li>• monitor budgets and maintain documentation.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>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.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Irrigation systems</i></b> may include:</p>	<p>low volume, sprinkler, moving sprinkler, surface or irrigation drainage systems.</p>

## **Unit Sector(s)**

Irrigation