



Australian Government

Department of Education, Employment and Workplace Relations

AHCIRG214A Install micro-irrigation systems for landscaping

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This Unit covers the process of installing domestic micro-irrigation systems under routine supervision and defines the standard required to: organise equipment and materials for installation work; set out and prepare site; install and test the irrigation system; monitor effectiveness and environmental impacts of the micro-irrigation system.

Application of the Unit

This Unit applies to workers in amenity horticulture enterprises that operate under limited supervision and within enterprise guidelines.

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 Prepare tools and materials for installation work	1.1 Materials, tools, equipment and machinery are selected according to irrigation design requirements and supervisor's instructions 1.2 The site for installation of the micro-irrigation system is identified according to enterprise plans and work procedures 1.3 Parts and equipment delivered to the site are checked according to system drawings and specifications 1.4 Water supply is checked to ensure that it is compatible with system specifications
2 Set out and prepare site	2.1 Measurement and marking out of irrigation lines is undertaken as directed by supervisor 2.2 Equipment operation and work practices conform to enterprise and legislative Occupational Health and Safety (OHS) requirements 2.3 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer's specifications and enterprise work procedures 2.4 OHS hazards are identified, risks assessed and risk controls are implemented 2.5 Personal Protective Equipment (PPE) is selected, used and maintained according to procedures
3 Install irrigation components	3.1 Work is undertaken according to plan and supervisor's instructions 3.2 Components are assembled and connected according to plan, with joints completed and tested 3.3 A clean and safe work area is maintained while installation work is carried out 3.4 Tools are chosen appropriate to the task being undertaken, and used according to guidelines and safe working practices
4 Complete installation work	4.1 Earthworks are finished off to plan specifications and enterprise work procedures 4.2 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 4.3 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures 4.4 System is flushed and commissioned as directed 4.5 Operating faults are identified and reported to supervisor and/or corrective actions taken

Required Skills and Knowledge

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

Required skills include:

Ability to:

- identify hazards and adopt safe work practices
- organise equipment and materials for installation work
- set out and prepare site
- install irrigation components
- complete installation work
- communicate with work team members, supervisors, contractors and consultants
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge includes:

Knowledge of:

- methods and techniques of micro-irrigation
- components of an micro-irrigation system
- characteristics and operation of joints, valves and sprinkler components
- basic calculations for water delivery
- indicators of over and under watering
- water requirements of relevant plants
- OHS and environmental legislation and enterprise procedures.

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 commercial landscaping operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- organise equipment and materials for installation work
- set out and prepare site
- install and test the irrigation system
- monitor effectiveness and environmental impacts of the micro-irrigation system.

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

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.

<i>Micro-irrigation systems</i> include:	<ul style="list-style-type: none"> • low pressure micro-sprays • drippers.
Irrigation <i>equipment</i> may include:	<ul style="list-style-type: none"> • pumps • delivery equipment • system controllers.
<i>Water supplies</i> may include:	<ul style="list-style-type: none"> • underground • mains • surface storage <p>including fixtures such as:</p> <ul style="list-style-type: none"> • dams • bores • windmills • tanks • channels.

Unit Sector(s)

Irrigation