



Australian Government

RIICRC203E Install sub-soil drainage

Release: 1

RIICRC203E Install sub-soil drainage

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to install sub-soil drainage in civil construction, including setting out and excavating trenches and installing sub-soil drains, end structures or outlets.

It applies to those working in operational roles. They generally work under supervision to undertake a prescribed range of functions involving known routines and procedures and take some responsibility for the quality of work outcomes.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories and industry sectors. Users must check requirements with relevant body before applying the unit.

Unit Sector

Civil construction

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for installing sub-soil drainage	1.1 Obtain, interpret, clarify and confirm work requirements 1.2 Access, interpret and apply documentation required to install sub-soil drainage 1.3 Identify and address potential risks, hazards and environmental issues, and implement control measures within scope of own role 1.4 Select and wear personal protective equipment according to site requirements 1.5 Identify, obtain, confirm and implement signage requirements 1.6 Select plant, tools and equipment required to carry out tasks and check for faults

ELEMENT	PERFORMANCE CRITERIA
	1.7 Plan stockpiling of materials according to job and site requirements
2. Set out and excavate trenches	2.1 Check trench depths and grades against job requirements 2.2 Set out and mark trench location according to job requirements 2.3 Communicate with plant operator to confirm excavation of trenches, placement of shoring and battering against job requirements
3. Install bedding materials	3.1 Identify bedding material type and depth according to job requirements 3.2 Lay bedding materials to specified depths and grades according to job requirements
4. Install sub-soil drainage	4.1 Place geo-textile according to job requirements 4.2 Prepare drain sections and fittings 4.3 Lay subsoil drain according to job requirements 4.4 Identify inspection opening and flush out points according to job requirements 4.5 Fit out end structures, outlets or clean outs to culverts, storm water or subsoil drain systems and connect according to site and job requirements 4.6 Install packing and prepare system for backfilling 4.7 Monitor backfill procedure and confirm work is completed according to job requirements
5. Conduct clean-up activities	5.1 Clear work area and recycle or dispose of materials according to site requirements according to site requirements 5.2 Clean, check, maintain and store plant, tools and equipment according to manufacturer specifications and site requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	Calculates basic measurements, including mass and dimensions
Self-management	Monitors and minimises own exposure to worksite risks and hazards during work activities

Unit Mapping Information

Supersedes and is equivalent to RIICRC203D Install sub-soil drainage.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIICRC203E Install sub-soil drainage

Modification History

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- install sub-soil drainage on at least two occasions in at least two separate locations, including:
 - installing at least 100 metres of sub-soil drain, including end structures or outlets
 - setting out and excavating trenches to specified location, depth and grade
 - installing sub-soil drainage using specified materials and meeting backfill requirements
 - clearing work area and recycling or disposing of materials
 - cleaning, checking, maintaining and storing plant, tools and equipment.

During the above, the candidate must:

- locate and apply required documentation, policies and procedures
- implement the requirements, procedures and techniques for installing sub-soil drainage, including:
 - identifying, addressing and reporting potential hazards and risks
 - identifying, obtaining, confirming and implementing signage requirements
 - selecting and checking for faults all plant, tools and equipment required to carry out tasks
 - identifying, addressing and reporting environmental issues and ground conditions
 - planning stockpiling of materials for ease of access and hazard reduction
- work with others to undertake and complete the installation of sub-soil drainage in a way that meets required outcomes, including:
 - preparing for and organising work activities to meet task requirements
 - communicating with others to receive and clarify work instructions
 - using communication techniques and aids to advise others of work activity and exclusion zones

- monitoring hazards and identifying and communicating changes to work environment.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislation required to install sub-soil drainage
- policies, procedures and documentation required to install sub-soil drainage, including those relating to:
 - site requirements
 - manufacturer specifications for required plant and equipment
 - hazard and risk management
 - job plans and specifications
 - work activity set up procedures
 - communication techniques and aids
 - project quality requirements
 - signage and exclusion zone requirements
 - environmental protection
 - work health and safety
 - waste management
- types, characteristics, technical capabilities and limitations of plant, equipment and materials required to install sub-soil drainage, including:
 - strip filter drains
 - perforated pipes with and without geo-textile fabric
 - granular materials enclosed in geo-textile fabric
 - end structures and outlets
- principles and techniques for effective sub-soil drainage installation, including:
 - bedding materials installation techniques
 - trench set out and excavation techniques.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment required to install sub-soil drainage
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,

- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

- Assessor requirements**

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years

Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.
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*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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