



Australian Government

RIICRC301D Maintain drainage systems

Release: 2

RIICRC301D Maintain drainage systems

Modification History

Release	Comment
1	This unit replaces RIICRC301A Maintain drainage systems
2	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to maintain drainage systems in Civil Construction.

This unit is appropriate for those working in operational roles

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.

Unit Sector

Civil construction

Elements and Performance Criteria

1. Plan and prepare to maintain drainage systems	1.1 Access, interpret and apply drainage systems maintenance documentation and ensure the work activity is compliant 1.2 Obtain, read, interpret, clarify and confirm work requirements 1.3 Identify and address potential risks, hazards and environmental issues, and implement control measures 1.4 Select and wear correct personal protective equipment appropriate for work activities 1.5 Locate initial design specifications and/or engineer's redesign 1.6 Locate drainage maintenance schedule and records of maintenance history 1.7 Determine temporary stormwater diversion requirement in accordance with existing drainage outlets, site requirements and
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	planned schedule of construction
2. Maintain drainage components	2.1 Regularly inspect and maintain drainage components and rectify or report faults 2.2 Repair drainage components as per initial design specifications and/or engineer's redesign 2.3 Flush out drainage system to clear blockages and provide clear flows of fluid
3. Excavate and repair drainage systems	3.1 Determine location of repairs from work order and survey site 3.2 Carry out excavation in accordance with task specifications 3.3 Prepare pipes and accessories in accordance with design method of repair 3.4 Replace pipe sections and join and align to line and specified fall 3.5 Install packing to maintain alignment of pipeline 3.6 Make joints to pipe section junctions in accordance with specification requirements 3.7 Backfill required section 3.8 Conduct inspection and testing of repaired drainage system to determine effectiveness of repairs
4. Maintain open drains	4.1 Maintain open drains to correct line and fall specifications 4.2 Finish surfaces adjoining open drains allowing ease of run off 4.3 Undertake adequate erosion control methods
5. Inspect, clear and repair culverts	5.1 Identify faults in culverts and determine appropriate repair requirements and specifications 5.2 Repair/replace sections and joint to levels and design specifications 5.3 Repair/maintain inlets and outlets in accordance with culvert design and specifications 5.4 Compact backfill
6. Clean up	6.1 Clear work area and dispose of or recycle materials 6.2 Seal and store/pack unused materials 6.3 Clean, check, maintain and store plant, tools and equipment

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIICRC301A Maintain drainage systems

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for RIICRC301D Maintain drainage systems

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Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies applicable documentation, policies and procedures
- implements the requirements, procedures and techniques for safe, effective and efficient drainage system maintenance including:
 - accessing, interpreting and applying documentation relevant to the maintenance of drainage systems
 - identifying and applying relevant drawings and job specifications to all work activities
 - 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 to carry out tasks
 - identifying, addressing and reporting environmental issues and ground conditions
 - determining temporary stormwater diversion requirements
- works effectively with others to undertake and complete the maintenance of drainage systems that meets all of the required outcomes including:
 - preparing for and organising work activities to meet all task requirements
 - communicating clearly and concisely with others to receive and clarify work instructions
 - using a range of communication techniques and aids to advise others of work activity and exclusion zones
 - monitoring hazards and identifying and communicating changes to the work environment during the work process

- demonstrates completion of maintaining drainage systems that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - maintaining drainage components to design specifications and functional requirements
 - applying techniques for locating faults in drainage systems
 - excavating and repairing drainage systems
 - conducting inspection and testing of repaired drainage system
 - maintaining open drains to correct line and fall
 - finishing surfaces adjoining open drains for ease of run off
 - undertaking adequate erosion control methods
 - inspecting, clearing and repairing culverts
 - clearing work area and disposing of, recycling or storing materials
 - sealing and storing/packing unused materials

Knowledge Evidence

The candidate must demonstrate knowledge of maintaining drainage systems through:

- accessing, interpreting and applying organisation and site requirements and procedures for:
 - identifying and managing risks
 - identifying, addressing and reporting environmental issues and ground conditions
 - setting up work activity
 - site isolation and traffic control responsibilities
 - work health and safety
 - managing waste
 - selecting and checking for faults, tools and equipment to carry out tasks
 - carrying out work to drawings and specifications
 - applying effective maintain drainage systems techniques

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,

- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 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.	

*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 frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

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