



**Australian Government**

# **CPCPDR2025A Drain work site**

**Release 1**

## **CPCPDR2025A Drain work site**

### **Modification History**

Prerequisite unit updated

Changes to performance criteria, required skills and knowledge, range statement and critical aspects

Not equivalent to CPCPDR2015A

### **Unit Descriptor**

This unit of competency specifies the outcomes required to remove water from a work site, either temporarily or permanently, through stormwater and sub-soil drainage systems. It includes the installation of submersible and non-submersible type pumps, suitable for pumping unscreened roof water, sub-soil water and surface water.

### **Application of the Unit**

This unit of competency supports development of skills for draining work sites before and during plumbing work.

Site location for work application may be either domestic or commercial, and may be a new work site or an existing structure being renovated, extended, restored or maintained.

### **Licensing/Regulatory Information**

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

### **Pre-Requisites**

CPCPCM2043A      Carry out WHS requirements

### **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

- |   |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Prepare for work.                   | <p>1.1 Plans and specifications are obtained.</p> <p>1.2 <b><i>Work health and safety</i></b> (WHS) and <b><i>environmental requirements</i></b> associated with draining a work site are adhered to throughout the work, including electrical safety.</p> <p>1.3 <b><i>Quality assurance requirements</i></b> are identified and adhered to according to workplace requirements.</p> <p>1.4 Tasks are planned and sequenced in conjunction with others involved in or affected by the work.</p> <p>1.5 Tools and equipment, including personal protective equipment, are selected and checked for serviceability.</p> <p>1.6 Work area is prepared to support efficient draining of the work site.</p> |
| 2 | Identify installation requirements. | <p>2.1 Proposed location of stormwater connection points, sumps, wells and <b><i>pumps</i></b> are determined from plans and specifications.</p> <p>2.2 Quantity and type of materials and equipment required are calculated from design drawings and specifications and comply with standards and local authorities' requirements.</p> <p>2.3 <b><i>Materials</i></b> and equipment are identified, ordered and collected according to workplace procedures.</p> <p>2.4 Materials and equipment are checked for compliance with docket and order form, and for acceptable condition.</p>                                                                                                               |

- 2.5 ***Sustainability principles and concepts*** are observed when preparing for and undertaking work process.
- 3 Prepare site.
- 3.1 Site is prepared to comply with plans and specifications, installation requirements and consideration for the location of existing services.
- 3.2 Site is prepared according to plans and specifications, site requirements and standards, ensuring minimum damage to surrounding structures and environment.
- 3.3 Sedimentation controls are constructed and positioned according to statutory requirements.
- 4 Install drainage equipment.
- 4.1 Sumps and/or wells are installed at specified levels and locations.
- 4.2 Inlet and discharge points are prepared according to plans, specifications, manufacturer requirements and site-specific drainage requirements.
- 4.3 Appropriate pumping equipment is positioned in specified suitable location.
- 4.4 Pipework and/or hoses are connected and installed according to manufacturer requirements.
- 5 Operate drainage system.
- 5.1 Pumps are activated to lower water level to specifications.
- 5.2 Pump control system is adjusted to meet specification requirements.
- 5.3 Pumps are maintained according to manufacturer specifications and workplace requirements.
- 6 Clean up.
- 6.1 Ground area is restored, and work area is cleared and materials disposed of, reused or recycled according to legislation, regulation, codes of practice and job specification.
- 6.2 ***Tools and equipment*** are cleaned, checked, maintained and stored according to manufacturer recommendations

and workplace procedures.

- 6.3 **Information** is accessed and documentation completed according to workplace requirements.

## Required Skills and Knowledge

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

### Required skills

- communication skills to:
  - access information
  - determine requirements
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - follow instructions
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication, such as hand signals
- initiative and enterprise skills to identify and report to appropriate personnel any faults in tools, equipment or materials
- literacy skills to complete workplace documentation
- numeracy skills to apply measurements and calculations
- planning and organising skills to:
  - plan and sequence tasks with others
  - plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technical skills to remove water from a work site, which may be a trench, pit or well, using a pump
- technology skills to:
  - access and understand site-specific instructions in a variety of media
  - use mobile communication technology

### Required knowledge

- characteristics of stormwater installations, including capacity and installation procedures
- excavation processes and procedures
- job safety analysis (JSA) and safe work method statements (SWMS)
- levelling and alignment processes
- positioning and construction of sedimentation and scouring controls
- principles of drainage and installation processes
- process of draining a site
- processes for accessing information and for calculating material requirements
- properties of water, including pressure and flow rates

- relevant statutory and authorities' requirements related to draining work sites
- SI system of measurements
- standards applicable to the work
- workplace and equipment safety requirements

## Evidence Guide

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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

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

- locating, interpreting and applying relevant information, standards and specifications to drain a work site
- applying safety requirements throughout the work sequence, including electrical safety requirements and the use of personal protective clothing and equipment
- given the plans and specifications, draining water from a pit, trench or excavation containing water to a depth of at least half a metre, using a submersible or non-submersible pump; the site must remain effectively drained for the duration of the job, ensuring:
  - application of sustainability principles and concepts
  - correct identification of location, design and details of proposed installation
  - correct selection and use of appropriate processes, tools and equipment
  - completing all work to specification
  - compliance with regulations, standards and organisational quality procedures and processes
  - communicating and working effectively and safely with others.

### Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the minimum task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry-related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

## Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning

experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

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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.

***Work health and safety*** is to be according to commonwealth, state and territory legislation and regulations and may include:

- handling of materials
- hazard control
- hazardous materials and substances
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including recognising and preventing hazards associated with:
  - dangerous materials
  - dirt mounds
  - identifying and testing for electrical hazards
  - other machines
  - pits
  - plant and equipment

- power poles
- recently filled trenches
- site drainage tools
- surrounding structure and facilities
- traffic control
- trees
- trip hazards
- underground services
- uneven and unstable terrain
- work site visitors and the public
- working in proximity to others
- use of firefighting equipment
- use of first aid equipment
- use of tools and equipment
- workplace environment and safety.

**Environmental requirements** cover water quality management and may include:

- clean-up protection
- stormwater protection
- waste management.

**Quality assurance requirements** may include:

- Environment Protection Authority (EPA)
- internal company quality assurance policy and risk management strategy
- International Standards Organisation
- site safety plan
- workplace operations and procedures.

**Pumps:**

- may include:
  - sludge pumps
  - submersible
  - surface
  - vacuum
- pump installation may be for temporary or permanent drainage.

**Materials** may include:

- fittings and jointing
- flexible pipes
- polymer
- other approved materials.

***Sustainability principles and concepts:***

- cover the social, economic and environmental use of resources to meet current and future needs
- may include:
  - correct positioning and construction of sedimentation and scouring controls according to relevant authorities
  - correct disposal of discharge according to relevant authorities
  - recycling of discharge water where appropriate.

***Tools and equipment*** may include:

- hand and power tools
- manual and mechanical excavation equipment
- measuring and levelling equipment
- pumps
- trench shoring equipment.

***Information*** may include:

- charts and hand drawings
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions
- material safety data sheets (MSDS)
- memos
- organisation work specifications and requirements
- plans and sketches
- regulatory and legislative requirements, particularly those pertaining to:
  - building codes
  - WHS and environmental requirements
  - plumbing regulations
- relevant Australian standards
- safe work procedures relating to the drainage of work sites
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.

## **Unit Sector(s)**

### **Functional area**

**Unit sector** Plumbing and services

## **Custom Content Section**

Not applicable.