



**Australian Government**

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

# **CPCPCM2027A Carry out levelling**

**Release: 1**

## **CPCPCM2027A Carry out levelling**

### **Modification History**

Not Applicable

### **Unit Descriptor**

**Unit descriptor** This unit of competency specifies the outcomes required to plan and use levelling equipment to establish, record and apply those levels to plumbing work applications.

### **Application of the Unit**

**Application of the unit** This unit of competency supports skills to undertake levelling operations for application in 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**

Not Applicable

### **Pre-Requisites**

#### **Prerequisite units**

CPCPCM2023A Carry out OHS requirements

## Employability Skills Information

**Employability skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

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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 for work.	<p>1.1. Requirements of the job are determined and various levels are obtained.</p> <p>1.2. <i>Safety (OHS)</i> requirements associated with levelling activities and workplace <i>environmental requirements</i> are adhered to throughout the work.</p> <p>1.3. <i>Quality assurance</i> requirements are identified and adhered to in accordance with workplace requirements.</p> <p>1.4. <i>Tools and equipment</i>, including personal protective equipment, are selected and checked for serviceability.</p>
2. Perform levelling.	<p>2.1. Height to be transferred is identified from drawings, plans or instructions.</p> <p>2.2. <i>Levelling equipment</i> is set up in accordance with manufacturer instructions and workplace procedures.</p> <p>2.3. Laser levels are operated in accordance with the relevant Australian standards.</p> <p>2.4. Levels are shot, recorded and marked in accordance with job requirements and workplace procedures within the required tolerance and specifications.</p>
3. Clean up.	<p>3.1. Work area is cleared and materials are disposed of or recycled in accordance with state or territory <i>statutory and regulatory authority</i> legislation and workplace procedures.</p> <p>3.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and workplace procedures.</p> <p>3.3. <i>Information</i> is accessed and documentation completed in accordance with workplace requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

## REQUIRED SKILLS AND KNOWLEDGE

Required skills for this unit are:

- communication skills to:
  - complete workplace documentation
  - determine requirements, follow instructions and access information
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - read and interpret:
    - drawings and specifications
    - documentation from a variety of sources
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication, such as hand signals
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- numeracy skills to apply measurements and calculations
- operating levelling equipment to read, record, establish and check:
  - levels, both horizontal and vertical used for the placement of pipe and piping
  - recording levels at specific points along a set out
  - recording and checking levels in drainage and sanitary excavations and plumbing operations
- organisational skills, including the ability to 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
- technological skills to:
  - access and understand site-specific instructions in a variety of media
  - use mobile communication technology.

### Required knowledge

Required knowledge for this unit is:

- different types of levelling equipment, their applications and their method of operation
- how to access relevant information, including codes and technical standards
- job safety analysis (JSA) and safe work method statements (SWMS)
- process of establishing, recording and checking levels and alignment
- relevant statutory and authority requirements related to establishing, recording and checking levels
- SI system of measurements
- workplace and equipment safety requirements.



# Evidence Guide

## 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 for the establishment, recording and checking of levels
- applying safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- as a minimum, the ability to:
  - use either a pipe or rotary laser and either a boning rod or string line
  - grade a pipe (or equivalent) over 10 metres on a grade to a tolerance of + and - 5mm, ensuring:
    - correctly identifying, recording and checking level
    - correctly selecting and using appropriate processes, tools and equipment
    - completing all work to specification
    - complying 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

## EVIDENCE GUIDE

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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 working 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



## EVIDENCE GUIDE

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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

### 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.

***Safety (OHS)*** is to be in accordance with commonwealth, state and territory legislation and regulations and may include:

- handling of materials
- hazard control and hazardous materials and substances
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- use of firefighting equipment
- use of first aid equipment
- use of tools and equipment
- workplace environment and safety.

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

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

## RANGE STATEMENT

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- 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.
- Tools and equipment*** may include:
- hand tools
  - measuring equipment
  - string line.
- Levelling equipment*** may include:
- boning rods
  - rotating laser level and pipe laser level
  - spirit level
  - tripod mounted automatic level
  - water level (U tube).
- Statutory and regulatory authorities*** include:
- state or territory statutory authority
  - statutory plumbing authority.
- Information*** may include:
- building codes
  - charts and hand drawings
  - diagrams or sketches
  - instructions issued by authorised organisational or external personnel
  - job drawings
  - manufacturer specifications and instructions
  - material safety data sheets (MSDS)
  - memos
  - OHS and environmental requirements
  - organisation work specifications and requirements
  - regulatory and legislative requirements, particularly those pertaining to plumbing and gasfitting authority regulations
  - relevant Australian standards
  - safe work procedures relating to handling and storing plumbing materials, including the disposal of waste
  - signage
  - verbal, written and graphical instructions
  - work bulletins
  - work schedules, plans and specifications.

## **Unit Sector(s)**

**Unit sector** Plumbing and services

## **Co-requisite units**

**Co-requisite units** Nil

## **Functional area**

**Functional area**