



Australian Government

CPC CST3019A Lay stonemasonry stairs

Release 1

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Modification History

New unit based on superseded unit BCF3027A Lay stair and floor surfaces

This version first released with CPC08 Construction, Plumbing and Services Training Package Version 9.

Not equivalent to superseded BCF unit

Unit Descriptor

This unit of competency specifies the outcomes required to build stonemasonry stairs, internally or externally, according to detailed job drawings and specifications.

Application of the Unit

This unit of competency supports the work of stonemasons who construct stonemasonry stairs in houses and gardens, working either individually or in a team.

Licensing/Regulatory Information

Check with relevant state and territory licensing and regulatory authorities. State and territory jurisdictions may have different regulatory requirements for work carried out on heritage structures.

Pre-Requisites

CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry

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 required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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|---|------------------------|-----|--|
| 1 | Plan and prepare work. | 1.1 | Work instructions are obtained using relevant <i>information</i> , confirmed and applied for <i>planning and preparation</i> purposes. |
| | | 1.2 | <i>Work health and safety (WHS) requirements</i> are followed according to safety plans and policies. |
| | | 1.3 | Signage and barricade requirements are identified and implemented. |
| | | 1.4 | <i>Tools and equipment</i> selected to carry out tasks are consistent with job requirements, checked for serviceability, and faults are rectified and reported before work begins. |
| | | 1.5 | Material quantity requirements are identified and calculated according to plans, specifications and <i>quality requirements</i> . |
| | | 1.6 | <i>Materials</i> appropriate to the work application are obtained, prepared, safely handled and located ready for use. |
| | | 1.7 | <i>Environmental requirements</i> are identified for the project according to environmental plans and <i>statutory and regulatory authority</i> requirements, and are applied. |
| | | 1.8 | Location of <i>steps or stairs</i> is identified from job drawings and specifications. |

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| 2 | Set out steps or stairs. | 2.1 | Rise and going dimensions for each step are identified from job drawings and specifications or calculated according to relevant codes and standards. |
| | | 2.2 | Position locations for faces to treads and risers are set out according to dimensions identified or calculated for rise and going of steps. |
| | | 2.3 | Face location of profile of steps or stairs is set out according to job drawings and specifications. |
| 3 | Lay stone steps or stairs. | 3.1 | Stones are selected for variance in shape to suit abutting blocks according to job drawings and specifications. |
| | | 3.2 | Starting point for steps of stairs is determined and first stone is selected. |
| | | 3.3 | First stone is individually bedded to finish level to proposed floor level according to job drawings and specifications. |
| | | 3.4 | Stones for each step are selected and individually bedded with close joints according to specified finish level. |
| | | 3.5 | Final bedding is carried out by adding additional sand where required and compacting according to job specifications. |
| | | 3.6 | Profile of steps or stairs is faced where applicable with like stone according to designed pattern and is checked to confirm that it is straight and plumb according to job specifications. |
| 4 | Clean up. | 4.1 | Work area is cleared according to job requirements and specifications. |
| | | 4.2 | Tools and equipment are cleaned, maintained and stored. |
| | | 4.3 | Unused materials are stored and waste material removed and disposed of according to environmental and workplace requirements. |

Required Skills and Knowledge

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

Required skills

- communication skills to:
 - enable clear and direct communication
 - use questioning to identify and confirm requirements
 - share information
 - follow instructions
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
- innovation skills to select appropriate tools and equipment, respond to workplace challenges and put ideas into action
- numeracy skills to apply measurements and calculate material requirements
- planning and organising skills to identify requirements, apply relevant resources and sequence tasks
- problem-solving skills to recognise and take action to rectify minor faults and problems
- reading skills to read and interpret drawings and specifications
- self-management skills to work safely, including safely handling materials
- teamwork skills to work with others to action tasks
- technical skills to:
 - identify and select materials specific to requirements
 - select and use appropriate plant, equipment, hand and power tools

Required knowledge

- Australian standards as they relate to the construction of stonemasonry steps or stairs, including:
 - AS1316 Masonry cement
 - AS3700 Masonry structures
- mortar mix composition for different types of stone
- National Construction Code as it applies to the construction of stonemasonry steps or stairs
- range and application of mortar additives
- safe operation of relevant tools, plant and equipment
- types and characteristics of stone
- types and safe operation of relevant lifting equipment
- types of designs for steps and stairs
- workplace and equipment safety requirements, including relevant statutory regulations,

codes and standards

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 This unit of competency could be assessed in the workplace or simulated workplace setting.

Assessment shall be while tasks are undertaken either individually or as part of a team under limited supervision.

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

A person should demonstrate the ability to set out and construct a stone staircase and provide evidence of:

- communicating with others to ensure safe and effective workplace operations
- complying with work health and safety requirements applicable to workplace operations
- complying with organisational policies and procedures
- selecting and using appropriate processes, tools and equipment
- applying organisational quality procedures and processes within context of laying and fixing stone
- selecting stone and mortar consistent with specification of job required
- marking out location of treads and risers accurately
- adopting safe and effective procedures and using them to handle and place stone
- identifying typical faults and problems that occur and taking necessary action to rectify them
- finishing steps or stairs and joints to specifications.

Context of and specific resources for assessment

Assessment of this unit:

- must be in the context of the work environment
- may be conducted in an off-site context, provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills
- must meet relevant compliance requirements.

Resource implications for assessment may include:

- construction materials appropriate to construction of stone steps and stairs
- documentation relative to task
- tools, plant and equipment appropriate to installation processes

- work location for construction of stone steps and stairs.

Method of assessment

Assessment for this unit must verify the practical application of the required skills and knowledge, using one or more of the following methods:

- direct observation of tasks in real or simulated work conditions
- questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- review of relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Guidance information for assessment

This unit could be assessed on its own or in combination with other units relevant to the job function.

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.

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.

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.

Information may include:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- memos
- regulatory and legislative requirements
- current Australian standards relating to laying masonry stairs
- safe work procedures
- safety data sheets (SDS)
- signage
- verbal, written and graphical instructions, including manufacturer specifications and instructions where specified

Planning and

preparation may include:

- work bulletins
- work schedules, plans and specifications.
- assessing conditions and hazards
- determining work requirements and safety plans and policies
- identifying equipment defects
- inspecting work sites.

Work health and safety requirements must

comply with state and territory legislation and regulations and project safety plan and may include:

- emergency procedures, including extinguishing fires, organisational first aid requirements, and evacuation procedures
- hazard control
- hazardous materials and substances
- personal protective equipment (PPE) prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including operational risk assessment and treatments associated with:
 - concealed services (water, power and gas)
 - lighting
 - restricted access barriers
 - traffic control
 - working at heights
 - work site visitors and the public
 - working in proximity to others
- use of firefighting equipment
- use of tools and equipment
- workplace environmental requirements and safety.

Tools and equipment

may include:

- brooms
- brushes
- concrete mixers
- jointing tools
- lifting clamps
- mallets
- masonry saws
- measuring tapes or rules
- mortar boards
- power leads
- rollers
- screed boards
- shovels
- spirit levels
- squares
- trowels
- wheelbarrows.

Quality requirements

may include:

- attention to specifications of work
- control of handling procedures
- finishing of stone surfaces
- quality of materials
- relevant regulations, including:
 - Australian standards
 - internal organisational quality policy and standards
 - manufacturer specifications where specified
 - workplace operations and procedures.

Materials used to renovate or restore stone may include:

- granite
- locally available stone
- marble
- slate.

Environmental requirements may include:

- clean-up management
- dust and noise control
- vibration management
- waste management.

Statutory and regulatory authority includes:

- federal, state and local authorities administering applicable Acts, regulations and codes of practice.

Steps and stairs may include:

- geometrical stairs
- open flight
- quarter and half space landings
- solid treads
- straight flight
- veneer faced.

Unit Sector(s)

Construction

Custom Content Section

Not applicable.