



Australian Government

Department of Education, Employment and Workplace Relations

CPCCBL3003A Carry out cavity brick construction

Release: 1

CPCCB3003A Carry out cavity brick construction

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to construct cavity brick/block buildings and structures. It includes planning, preparation, set out and installation of the masonry.

Application of the Unit

Application of the unit This unit of competency supports achievement of skills in laying bricks to construct a cavity brick building, which includes working with others and as a member of a team.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

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

Employability Skills Information

Employability skills 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

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work.	1.1. Work instructions, including plans, specifications, quality requirements and operational details are obtained from relevant information, confirmed and applied to determine bricklaying and blocklaying tasks. 1.2. Safety (OHS) requirements are followed in accordance with safety plans and policies. 1.3. Signage and barricade requirements are identified and implemented. 1.4. Plant, tools and equipment selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement. 1.5. Material quantity requirements are calculated in accordance with plans, specifications and quality requirements. 1.6. Materials appropriate to the work application, including required fire resistance rating, are identified, obtained, prepared, safely handled and located ready for use. 1.7. Environmental requirements are identified for the project in accordance with environmental plans and statutory and regulatory authority obligations, and are applied.
2. Set out brickwork/blockwork.	2.1. Bricks and/or blocks are identified, selected and checked for conformity with specifications and compliance with standards. 2.2. Work platform is erected in accordance with regulatory and workplace requirements. 2.3. Location and structural details of brickwork/blockwork are identified from job drawings and job specifications. 2.4. Base brickwork below floor construction is set out to location, dimensions and specifications in compliance with standards. 2.5. Load bearing brickwork, including engaged piers, dwarf walls, isolated piers and corbelling are set out to job drawings and specifications. 2.6. Cavity brick wall is set out to requirements of job drawings.
3. Construct base	3.1. Mortar mix is prepared and checked for conformity

ELEMENT	PERFORMANCE CRITERIA
brickwork/ blockwork.	and bricks/blocks are laid to set out according to specifications and standards. 3.2. Brickwork/blockwork gauge is determined and set out rod is prepared. 3.3. Base brickwork/blockwork is constructed for cavity construction to requirements of regulations and specifications.
4. Position door and window frames.	4.1. Window frames are located and built in to cavity walls to specification, and are protected from mortar droppings during construction. 4.2. Door jambs are located, built in and fixed to cavity walls and single leaf walls according to job drawings and specifications.
5. Construct brick walls.	5.1. Brick or block cavity construction walls are constructed to job specifications and standards. 5.2. Damp proof courses and flashings are laid/built in to job specifications. 5.3. Ventilation for solid brick construction is built to requirements of job specification and regulations. 5.4. Walls are to be straight and true in plumb, line and level within standard tolerances. 5.5. Wall ties are positioned to comply with standards. 5.6. Openings are constructed and flashing is installed to job specifications. 5.7. Lintels are installed to job specifications. 5.8. Control joints are formed in accordance with locations on job drawings and standards. 5.9. Weepholes, brick reinforcing, vermin proofing and wall flashings are located and built in to job specifications. 5.10. Gables and parapets are constructed by plans and specifications. 5.11. Sill bricks are cut and laid to line in accordance with job specifications. 5.12. Tie down and lateral support systems for ceiling/roof structures are installed to walls in accordance with plans, specifications and standards.
6. Rake or rule joints.	6.1. Joints of laid brickwork/blockwork are raked or ruled to correct depth and profile in accordance with job specifications. 6.2. Brickwork/blockwork is brushed down prior to

ELEMENT	PERFORMANCE CRITERIA
	drying to remove unwanted mortar.
	6.3.Excess mortar is removed from brick/blockwork surfaces and cavities are cleaned free of mortar and debris in accordance with manufacturer recommendations, job specifications and standards.
7. Clean up.	7.1.Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.
	7.2.Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills for this unit are:

- communication skills to:
 - determine requirements
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - read and interpret:
 - documentation from a variety of sources
 - plans, specifications and drawings
 - report faults
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- numeracy skills to apply measurements and make calculations
- 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.

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge for this unit is:

- brick and block expansion and growth, control and articulation joints
- brick bond patterns
- characteristics and applications of materials for cavity brick construction, including fire control and separation required by the Building Code of Australia (BCA) and other legislation
- construction terminology
- job safety analysis (JSA) and safe work method statements
- material safety data sheets (MSDS)
- materials storage and environmentally friendly waste management
- plans, specifications and drawings
- processes for the calculation of material requirements
- quality requirements
- techniques of cavity brick construction, including:
 - anti-termite measures
 - closing of cavities and capping systems
 - damp proofing
 - floor, wall and roof members
 - gable and eaves construction
 - lintels and load bearing components
 - stepped and level flashing for parapets and gables
 - sub-floor construction
 - tying components
 - ventilation
 - vermin control
- types, characteristics, uses and limitations of plant, tools and equipment
- workplace and equipment safety requirements.

Evidence Guide

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 a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction 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 the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations
- comply with organisational policies and procedures, including quality requirements
- safely and effectively use tools, plant and equipment
- communicate and work effectively and safely with others
- as a minimum, given the plans and specifications, construct a section of a cavity brick building, including sub-floor walling; damp proof course (DPC) and ventilation; attached and isolated piers; openings (window and door) and lintels; brick cavity ties and roof tie-downs; and parapets (stepped flashing), ensuring:
 - correct identification of requirement and finishing of the task
 - correct selection and use of appropriate processes, tools and equipment
 - completing all work to specification ensuring correct selection and use of fire-rated materials and methods of construction.

Context of and specific

This competency is to be assessed using standard

EVIDENCE GUIDE

resources for assessment

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 mandatory 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.

EVIDENCE GUIDE

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

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 includes:

- verbal or written and graphical instructions
- signage

RANGE STATEMENT

	• work schedules • plans and specifications • work bulletins • memos • MSDS • diagrams or sketches • safe work procedures related to carrying out cavity brick construction • regulatory and legislative requirements pertaining to carrying out cavity brick construction • manufacturer specifications and instructions where specified • organisation work specifications and requirements • instructions issued by authorised organisational or external personnel • relevant Australian standards.
<i>Bricklaying and blocklaying tasks:</i>	• include all clay brick (wire cut/pressed) and concrete block (hollow and solid) masonry work • may be performed on a new construction site, an existing structure being renovated or extended or an existing structure subject to service restoration or maintenance.
<i>Safety (OHS)</i> is to be in accordance with legislation, regulations, codes of practice, organisational safety policies and procedures, and project safety plan and may include:	• emergency procedures, including emergency shutdown and stopping, extinguishing fires, organisational first aid requirements and evacuation • handling of materials • hazard control • hazardous materials and substances • safe operating procedures, including the conduct of operational risk assessment and treatments associated with: • earth leakage boxes • lighting • power cables, including overhead service trays, cables and conduits • restricted access barriers • surrounding structures • traffic control

RANGE STATEMENT

Tools and equipment:

- trip hazards
- underground services, including water, gas, electricity and communications
- work site visitors and the public
- working at heights
- working in confined spaces
- working in proximity to others
- working with dangerous materials
- organisational first aid
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- use of firefighting equipment
- use of tools and equipment
- workplace environment and safety.
- include:
 - bolsters
 - brick grabs and margin or raking tools
 - brooms
 - buckets
 - builders' lines
 - concrete mixers
 - dumpy levels
 - elevators
 - hammers (brickies, club and scutch)
 - hoses
 - jig saws
 - jointing tools
 - line blocks
 - line pins
 - mason's squares
 - masonry saws
 - measuring tapes and rules
 - mortar boards
 - plumb rules
 - profiles
 - shovels
 - spirit levels
 - straight edges

RANGE STATEMENT

	• string lines • trowels • wheelbarrows • may include: • brick buggies • elevators • forklifts • materials hoists • pallet trolleys • scaffolds • small petrol or diesel engines or compressors.
Quality requirements include relevant regulations, including:	• Australian standards • internal company quality policy and standards • manufacturer specifications, where specified • workplace operations and procedures.
Materials include:	• aggregates • cement • clay bricks • lime • masonry blocks • reinforcing materials • steel, aluminium and timber window frames • timber and steel door frames • waterproofing materials.
Environmental requirements include:	• clean-up protection • noise and dust • vibration • waste management.
Statutory and regulatory authorities include:	• federal, state and local authorities administering applicable Acts, regulations and codes of practice.
Location of laid brickwork may be on a:	• slab • suspended floor.
Brick or block cavity construction includes:	• straight, square and plumb brick/block, wall ties and lateral support systems, dampcourse and flashings, openings and reinforcement • ensuring compliance with incipient spread of fire requirements.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area