UNIT CODE	CPCCBL3004
UNIT TITLE	Construct masonry steps and stairs
APPLICATION	This unit specifies the skills and knowledge required to calculate and construct masonry steps, stairs and wing walls using various masonry products. This unit applies to bricklayers and blocklayers who set out and construct steps and stairs on new or existing structures. It is suitable for people operating with some autonomy. A person working at this level would be expected to take responsibility for organising and completing tasks assigned to them without needing close supervision. Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement. No licensing, legislative or certification requirements apply to this unit at the time of publication.
PREREQUISITE UNIT	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe what needs to be done to demonstrate achievement of the element.
1. Prepare for work.	1.1 Select, fit correctly and use personal protective equipment (PPE) appropriate for job. 1.2 Read, interpret and apply masonry steps and stairs requirements from current plans, specifications, standards and codes. 1.3 Follow requirements in workplace safety and environmental documentation and workplace procedures. 1.4 Calculate material quantities for the task. 1.5 Identify potential hazards and determine and implement control measures. 1.6 Select and check condition of plant, equipment and tools and report damage or faults to relevant person.

	1.7 Check conformity of materials against the specifications, blend masonry products and place materials in preparation for the work.
2. Set out brickwork/blockwork.	2.1 Calculate the total rise and going of the flight of stairs. 2.2 Calculate tread, riser sizes and slope relationship rule. 2.3 Set out position of stairs on a prepared footing to comply with plans, specifications and Australian Standards. 2.4 Set out parallel wing wall to maintain bond and gauge with treads and risers.
3. Lay steps and wing walls.	3.1. Mix mortar to consistency for job requirements. 3.2 Construct base brickwork or blockwork accurately to set out marks. 3.3 Lay stairs square and plumb to the specified bond. 3.4 Construct parallel sloping wing wall to align with tread and riser bond and gauge. 3.5 Finish joints to specified profile. 3.6 Brush down face of brickwork/blockwork prior to drying to remove unwanted mortar.
4. Clean up.	4.1 Clear the work area, and dispose, reuse or recycle materials following workplace and environmental requirements. 4.2 Clean tools and equipment, check for serviceability and report damage or faults. 4.2 Store and secure tools and equipment following workplace procedures.
FOUNDATION SKILLS Candidates require: • numeracy skills to: o use measurements and formulas to calculate quantities o apply geometry to stair calculations and set out • technology skills to: o use digital tools and devices to communicate and collaborate effectively with others.	
UNIT MAPPING INFORMATION	Supersedes and is equivalent to CPCCBL3004A Construct masonry steps and stairs
LINKS	Companion volumes to this training package are available at the

	VETNet website: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad

TITLE	Assessment requirements for CPCCBL3004 Construct masonry steps and stairs

PERFORMANCE EVIDENCE

To demonstrate competency in this unit, a candidate must meet the performance criteria of this unit by constructing two flights of stairs both with a parallel wing wall to one side.

In doing this, the candidate must construct:

- one flight with a minimum of three pre-cast concrete treads
- one flight with a minimum of three solid masonry treads
- all treads with a 3 mm slope for water run-off
- wing wall to match the slope of the stairs with symmetrically cut mitres and uniform joints
- both flights to comply with current and relevant Australian Standards, specifications and within the codes for brickwork tolerances.

KNOWLEDGE EVIDENCE

To be competent in this unit, a person must demonstrate knowledge of:

- construction terminology relating to the construction of masonry steps and stairs:
    - total rise
    - total going
    - landing
    - nosing
    - wing wall
- current Australian Standards and codes for staircase construction:
    - min/max permitted riser size
    - min/max permitted tread size
    - slope calculation 2R + 1G rule
    - min height of a wing wall
    - max number of steps in one flight
    - step size tolerance _/+5 mm
    - max permitted deviation from level (10 mm in 10 m, or max of 15 mm)
    - max permitted bow of a masonry wall (+/_ 5 mm)
    - max lipping of materials (Max 2 mm)
    - max/min permitted perpend joint size (Min size 5 mm, +/- 10 mm from specified size)
    - max min permitted bed joint size (10 mm +/_ 3 mm)
    - vertical alignment of perpend joints (15 mm per 2 m height of wall, measured centre to centre)
- key features of National Construction Code (NCC) relevant to constructing masonry stairs

and steps

- characteristics, applications and limitations of approved materials for step and stair construction
- brick bond patterns
- functional and operational features of plant, equipment and hand and power tools
- workplace safety:
    - job safety and environmental analysis (JSEA)
    - hazardous manual handling
    - exposure to silica
    - exposure to loud noise
- features of working drawings and specification
- processes and techniques for:
    - masonry steps and stairs construction
    - applying geometry to stair calculations and set out
- environmental requirements for workplace processes and waste disposal.

ASSESSMENT CONDITIONS

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation reflecting workplace conditions and standards, materials, equipment, activities, responsibilities, procedures, safety requirements and environmental considerations.

LINKS	Companion volumes to this training package are available at the VETNet website: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad