



**Australian Government**

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

# **CPC CST3010A Set out and cut letters in stone**

**Release: 1**

## CPCST3010A Set out and cut letters in stone

### Modification History

Not Applicable

### Unit Descriptor

#### Unit descriptor

This unit specifies the outcomes required to use hand applied skills in the use and adaptation of methods and equipment for the production of a range of letters and fonts set in stone or similar material.

### Application of the Unit

#### Application of the unit

This unit of competency supports the achievement of skills and knowledge to set out and cut letters in stone products, which may include 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

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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. Plan and prepare.	<p>1.1. Work instructions and operational details are obtained using relevant <i>information</i>, confirmed and applied for <i>planning and preparation</i> purposes.</p> <p>1.2. <i>Safety (OHS)</i> requirements are followed in accordance with safety plans and policies.</p> <p>1.3. Signage and barricade requirements are identified and implemented.</p> <p>1.4. <i>Tools and equipment</i> selected to carry out tasks are consistent with job requirements, checked for serviceability and any faults are rectified or reported prior to commencement.</p> <p>1.5. Material quantity requirements are calculated in accordance with plans, specifications and <i>quality requirements</i>.</p> <p>1.6. <i>Materials</i> appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.</p> <p>1.7. <i>Environmental requirements</i> are identified for the project in accordance with environmental plans and <i>statutory and regulatory authority</i> requirements, and are applied.</p>
2. Select stone.	<p>2.1. Stone is selected for quality, grain and dimensions to suit job specifications.</p> <p>2.2. <i>Surface for lettering</i> is prepared for setting out process in accordance with type of stone and specifications.</p>
3. Set out for lettering.	<p>3.1. Drafting skills are used to accurately set out <i>lettering</i> to full size for transference to work surfaces using <i>templates or stencils</i> and fonts appropriate to cemetery monument set-out and design.</p> <p>3.2. Fonts are set out appropriate to architectural settings and to suit a variety of commercial signage applications.</p> <p>3.3. Set out lettering is accurately transferred to stone face by use of appropriate transfer method.</p>
4. Cut and form traditional and contemporary letters.	<p>4.1. Raised and flush letters are cut and formed in stone to set-out designed shapes.</p> <p>4.2. V-formed letters are cut and formed in stone to set-out designed shapes.</p> <p>4.3. Decorative ornamental work in lettering is cut and formed in stone to set-out designed shapes.</p>

ELEMENT	PERFORMANCE CRITERIA
5. Cut and form innovative forms of lettering.	5.1. Innovative design and technique for working letters in stone are developed and drafted into set-out. 5.2. Drafted <i>design is transferred</i> to prepared surface by an appropriate method. 5.3. Lettering is cut and formed in stone to designed shapes and style of cut.
6. Clean up.	6.1. Final stone finish is cleaned to specification. 6.2. Waste materials are disposed of according to EPA requirements. 6.3. Tools are cleaned, maintained and stored.

## 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:

- ability to recognise procedures, respond to change and contribute to workplace responsibilities, such as current work site environmental or sustainability frameworks or management systems
- communication skills to:
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - follow instructions
  - identify letters in order to check spelling
  - read and interpret:
    - client's brief
    - drawings and specifications
  - 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 calculations
- planning and organisational skills to identify requirements, apply relevant resources and sequence tasks
- problem solving skills to recognise and take action to rectify minor faults and

## REQUIRED SKILLS AND KNOWLEDGE

problems

- teamwork skills to be able to work with others to action tasks and relate to people from a range of cultural, social, ethnic backgrounds and with varying physical and mental abilities.

### Required knowledge

Required knowledge for this unit is:

- drawing and sketching techniques
- interpretation of drawings and specifications
- job safety analysis (JSA) and safe work method statements
- lettering techniques relevant to stonemasonry work
- materials handling techniques
- measuring and setting out processes related to layout of signs or lettering
- methods of working stone
- traditional and contemporary font styles used in stonemasonry work
- types and use of portable power tools relevant to stonemasonry work
- types and use of stencils and templates
- types and use of tools and equipment relevant to dressing stone and processes for cutting letters
- types of stone and their characteristics
- 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, 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 produce a range of stone letters in different fonts, providing evidence of the ability to:

- comply with OHS regulations applicable to workplace operations
- comply with organisational policies and procedures, including quality assurance requirements within the context of lettering in stone
- select and use appropriate processes, tools and equipment to carry out tasks
- demonstrate sound and accurate techniques to draft lettering to design requirements
- prepare face for lettering, carried out to surface finish and setting out specifications
- accurate setting out of letters to form balanced presentation
- check spelling prior to transference or cutting processes
- demonstrate sound and accurate techniques to transfer design to stone face
- demonstrate correct procedures and sound techniques to use tools and equipment to produce lettering to design
- provide protection to surrounding area during application processes
- complete lettering and finish surface to design and specifications
- communicate with others to ensure safe and

## EVIDENCE GUIDE

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effective workplace operations.

**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:

- materials relative to the activity
- hand and power tools appropriate to activity
- plant and equipment appropriate to activity
- suitable work area appropriate to activity
- appropriate drawings, documentation and drawing or sketching equipment relevant to activity.

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 a reasonable inference that competency is not only verified under the particular assessment circumstance, but is able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over



## EVIDENCE GUIDE

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a period of time reflecting the scope of the role and 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

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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.

***Information*** includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions, where specified
- material safety data sheets (MSDS)

## RANGE STATEMENT

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***Planning and preparation*** include:

***Safety (OHS)*** is to be in accordance with state and territory legislation and regulations and project safety plan and may include:

***Tools and equipment*** include:

- memos
- regulatory and legislative requirements pertaining to handling and cutting stone
- relevant Australian standards
- safe work procedures relating to handling and cutting stone
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.
- assessment of conditions and hazards
- determination of work requirements and safety plans and policies
- equipment defect identification
- work site inspection.
- emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation
- hazard control
- hazardous materials and substances
- organisational first aid
- PPE prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
  - concealed services (water, power and gas)
  - lighting
  - restricted access barriers
  - traffic control
  - work site visitors and the public
  - working at heights
  - working in confined spaces
  - working in proximity to others
- use of firefighting equipment
- use of tools and equipment
- workplace environmental requirements and safety.
- clamps
- drafting equipment
- hammers

## RANGE STATEMENT

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- lettering chisels
  - mallets
  - masonry drills
  - measuring tapes and rules
  - pneumatic chisels, including lettering chisels
  - power grinders
  - punch
  - scribes
  - sculptor's chisels
  - squares.
- Quality requirements*** include:
- attention to specifications of work
  - control of handling procedures
  - finishing of stone surfaces
  - quality of materials
  - relevant regulations, including:
    - Australian standards
    - internal company quality policy and standards
    - manufacturer specifications where specified
    - workplace operations and procedures
  - use and maintenance of equipment.
- Materials*** include:
- granite
  - marble
  - reconstituted stone
  - slate.
- Environmental requirements*** include:
- clean-up management
  - dust and noise
  - vibration
  - waste management.
- Statutory and regulatory authority*** includes:
- federal, state and local authorities administering applicable Acts, regulations and codes of practice.
- Surfaces for lettering*** include:
- dressing
  - milling or cutting
  - painting surface for setting out
  - polishing
  - sandblasting.
- Lettering*** may extend beyond
- heraldry
  - iconography

## RANGE STATEMENT

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recognised fonts to include:

- symbols.

*Templates and stencils* may be made of:

- aluminium sheet
- cardboard
- plastic sheet
- plywood
- zinalume sheet.

*Design transfer* involves:

- computer aided design (CAD) equipment to assist setting out, such as vinyl cut out
- direct drafting
- stencils
- templates
- tracings.

## Unit Sector(s)

Unit sector                      Construction

## Co-requisite units

Co-requisite units              Nil

## Functional area

Functional area