UNIT CODE	CPCCST3024
UNIT TITLE	Apply conservation principles and practices to heritage stonework
APPLICATION	This unit specifies the skills and knowledge required to undertake conservation work to historic stone buildings and structures, as well as cemetery and other monuments. This unit applies to stonemasons who work independently or in a team during conservation work relating to heritage stonemasonry work. 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. Plan the work.	1.1 Read, interpret and apply heritage stonemasonry work requirements from work instructions, plans, specifications, standards and codes. 1.2 Clarify and confirm specific conservation work details in consultation with architects, supervisors and other relevant persons. 1.3 Follow relevant information from workplace procedures, workplace safety and environmental documentation. 1.4 Calculate material quantities for the task. 1.5 Determine job priorities and sequence job tasks in consultation with others on site.

2. Prepare for work.	2.1 Identify specified conservation procedures and their application to different parts of the building. 2.2 Evaluate the physical condition and heritage significance of masonry materials and identify the required treatment for same masonry materials in different parts of the building. 2.3 Select and check condition of appropriate plant, equipment and tools and report damage or faults to relevant person. 2.4 Check conformity of materials against job requirements. 2.5 Select, fit correctly and use personal protective equipment (PPE) appropriate for job.
3. Carry out conservation work to heritage stone.	3.1 Set out section of building for conservation work following work instructions and job requirements. 3.2 Protect surrounding stonework from damage. 3.3 Prepare and record samples of work for approval. 3.4 Clean stone surface, apply surface treatment and repair stone using mortar.
4. Carry out re-pointing	4.1 Sieve and blend recommended aggregates and sands to produce acceptable material. 4.2 Check materials, binders and mixing methods appropriate for conservation work. 4.3 Prepare samples for approval by supervisor. 4.4 Rake out and prepare joints as specified. 4.5 Mix mortar using approved materials and mixing method. 4.6 Protect existing and new work from mortar stains and pre-wet masonry to control suction. 4.7 Place and pack mortar into joints and finish joint to specified profile and depth. 4.8 Apply curing method appropriate for the work.
5. Clean up.	5.1 Clear the work area, and dispose of, reuse or recycle materials following workplace and environmental requirements. 5.2 Clean tools and equipment, check for serviceability and report damage or faults. 5.3 Store and secure tools and equipment following workplace procedures.

FOUNDATION SKILLS Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.	
UNIT MAPPING INFORMATION	No equivalent unit
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 CPCCST3024 Apply conservation principles and practices to heritage stonework

PERFORMANCE EVIDENCE

To demonstrate competency in this unit, a candidate must meet the performance criteria of this unit by applying conservation methods to heritage stonework.

In doing this, the candidate must:

- clean a minimum of min 500 mm x 500 mm stone area
- apply a minimum of two surface treatments to the stone area
- carry out mortar repair to a minimum area of 100 mm x 200 mm on ashlar stone
- carry out mortar repair to a minimum area of 100 mm x 200 mm on to a moulded profile
- repoint a minimum of 1.5 m straight joints and a minimum 300 mm of moulded joints.

KNOWLEDGE EVIDENCE

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

- heritage significance as stated in:
  - The Burra Charter
  - Heritage Act
  - Heritage Building Classifications
- fundamentals and importance of conservation:
  - role of independent testing authorities relating to materials and treatments
  - importance and purpose of working under the supervision of heritage experts
  - difference between traditional stone restoration and the preservation of existing materials
  - the effects of conservation materials and procedures on surrounding materials
  - assessment and remedial work applied on a case to case basis
- characteristics, application and limitations of stone conservation materials and components:
  - mortar constituents, binders, aggregates, pigments, additives
  - mortar consistency
  - surface cleaners and treatments
  - materials used in crack repair
  - stone consolidants
- processes and techniques for heritage work
- principles of stone conservation:
  - maintenance
  - restoration
  - reconstruction
  - repair

- adaption
- preservation
- cleaning

- physics of materials in conservation work
- functional and operational features of plant, equipment and hand and power tools;
  - micro-abrasive cleaning
  - laser cleaning
  - steam cleaning
  - battery operated tools
- workplace processes and procedures
- workplace safety:
  - exposure to silica
  - job safety and environmental analysis (JSEA)
  - hazardous manual tasks
  - working at heights
  - dust and dust suppression
  - exposure to excessive noise
- features of working drawings and specifications
- environmental requirements for workplace processes and waste disposal
- sustainability principles
- digital technology to source information and communicate with others
- key requirements of the National Construction Code (NCC) relevant to heritage stonework
- Australian standards and codes.

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