



Higher National Unit specification

General information for centres

Unit title: Conservation Crafts: Stonemasonry Skills

Unit code: F500 35

Unit purpose: This Unit is designed to introduce candidates to the properties and nature of building stone. It will provide an advanced understanding of the skills, techniques and expertise of the stonemasonry banker craft. This will develop an appreciation of this traditional building craft which will inform further studies in Architectural Conservation craft. The Unit will allow candidates to experience hands on activity in order to appreciate the nature of stonemasonry activities.

On completion of the Unit the candidate should be able to:

- 1 Cut a splay moulding on a stone.
- 2 Produce a traditional surface finish on a stone.
- 3 Examine properties and characteristics of building stones.
- 4 Examine the geological classification of building stones.

Credit points and level: 1 HN credit at SCQF level 8: (8 SCQF credit points at SCQF level 8*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: It would be beneficial if candidates had some industry knowledge. This could be demonstrated by possession of the HN Unit *Conservation Crafts Stonemasonry: An Introduction*.

Core Skills: There are opportunities to develop the Core Skills of *Communication* (Reading and Writing), *Numeracy* (Using Numbers), *Information Technology* (Using IT) and *Problem Solving* (Critical Thinking) all at SCQF level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

General information for centres (cont)

Assessment: Outcome 1 and 2 Candidates are to produce the masonry mouldings and surface finish using hand held masonry tools, work must include 1 internal mitre and 1 external mitre.

Outcome 3 and 4: Candidates have to complete a report on a listed building or a building of historical significance. The main emphasis of the report should be on the stonework used in the building. There may be opportunities for integration of assessments. Candidates to use at least two different sources of information.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Cut a splay moulding on a stone

Knowledge and/or Skills

- ◆ Cut a splay moulding on stone to a specified tolerance
- ◆ Tolerances
- ◆ Cutting stone
- ◆ Stonemasonry tools
- ◆ Masonry mitres
- ◆ Health and safety procedures

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ cut the stone in the correct sequence using appropriate stonemasonry tools, roughing down using appropriate hand tools
- ◆ cut a splay moulding on stone incorporating one internal mitre and one external mitre to a tolerance of +/- 2mm
- ◆ comply with Health and Safety procedures

The splay moulding must be cut in a block of stone no smaller than 300mm x 300mm x150mm

Assessment Guidelines

This Outcome may be assessed by a practical assignment with candidates cutting mouldings and mitres on a block of stone. It is recommended that candidates work to a -/+2 mm tolerance in all practical work.

Higher National Unit specification: statement of standards (cont)

Unit title: Conservation Crafts: Stonemasonry Skills

Outcome 2

Produce a traditional surface finish on a stone

Knowledge and/or Skills

- ◆ Produce a surface finish
- ◆ Finishing processes

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ cut the stone in the correct sequence using appropriate stonemasonry tools, roughing down using appropriate hand tools
- ◆ produce a surface finish on stone

Assessment Guidelines

This Outcome may be assessed by a practical assignment with candidates producing a traditional surface finish on a block of stone. It is recommended that the surface finish to the stone be produced to a -/+ 2 mm tolerance for the given specification.

Outcome 3

Examine properties and characteristics of building stones

Knowledge and/or Skills

- ◆ Building stones
- ◆ Natural bedding planes
- ◆ Life cycle of stones

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can examine:

- ◆ the properties and characteristics of building stones. Sandstone, limestone and granite including their natural bedding planes
- ◆ the life cycle of each type
- ◆ how the selection process incorporates longevity of each type as a factor in construction

Assessment Guidelines

The assessment of this Outcome could be combined with Outcome 4, details of which are given under Outcome 4 below.

Higher National Unit specification: statement of standards (cont)

Unit title: Conservation Crafts: Stonemasonry Skills

Outcome 4

Examine the geological classification of building stones

Knowledge and/or Skills

- ◆ Geological classification
- ◆ Formation processes of sandstone, limestone and granite and how this will affect the durability of the stone.

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ examine geological classification of sandstone, limestone and granite and their formation processes
- ◆ distinguish between sedimentary, metamorphic and igneous classifications

Assessment Guidelines

The assessment of this Outcome may be combined with Outcome 3. Candidates could be presented with an assignment brief from which they will investigate and evaluate the use of stones. The brief could be on a listed building or a building of historical significance. Candidate evidence could take the form of a report incorporating the Evidence Requirements of Outcomes 3 and 4.

Administrative Information

Unit code F500 35

Unit title: Conservation Crafts: Stonemasonry Skills

Superclass category: TG

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History of changes:

Version	Description of change	Date

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Higher National Unit specification: support notes

Unit title: Conservation Crafts: Stonemasonry Skills

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit has been designed to provide candidates with the knowledge and practical skills to create masonry moulds and understand the properties of stone.

The tutor shall use the guidelines given in BS 7913 Guide to the principles of the conservation of historic buildings 1998

Definitions

Conservation: Action to secure the survival or preservation of buildings, cultural artefacts, natural resources, energy or any other thing of acknowledged value for the future. NOTE: Where buildings or artefacts are involved, such actions should avoid significant loss of authenticity or essential qualities.

Repair: Work beyond the scope of regular maintenance to remedy defects, significant decay or damage caused deliberately or by accident, neglect, normal weathering or wear and tear, the object of which is to return the building or artefact to good order, without alteration or restoration. NOTE: Most repair work should be anticipated and planned but occasionally it can be required in response to a specific event, such as a storm or accident.

Restoration: Alteration of a building, part of a building or artefact which has decayed, been lost or damaged or is thought to have been inappropriately repaired or altered in the past, the objective of which is to make it conform again to its design or appearance at a previous date. NOTE: the accuracy of any restoration depends on the extent to which the original design or appearance at a previous date is known, or can be established by research.

(Definitions from BS 7913 Guide to the principles of the conservation of historic building 1998)

Outcome 1 list of tools that could be used: Tungsten tipped chisels, teeth tool point mallet, square.

Outcome 2 Reticulated, vermiculated droved, dabled broached are all finishes that could be used.

Outcome 3 natural bedding planes of sandstone, limestone and granite and their formation could be examined and explained.

Outcome 4 Formation of the stones could be explained and evaluated.

Higher National Unit specification: support notes (cont)

Unit title: Conservation Crafts: Stonemasonry Skills

Guidance on the delivery and assessment of this Unit

This Unit is likely to form part of a Group Award designed to provide candidates with technical Knowledge and Skills for employment within an architectural conservation environment.

The first two Outcomes involve practical masonry skills and should be delivered in an appropriate workshop environment. All equipment should be supplied for the candidates to use. It is fundamental to this Unit that demonstration of correct methods and techniques for cutting stone are shown and candidates are given time to master these techniques prior to assessment. Health and safety guidelines should be adhered to at all times. Personnel protective equipment should be used in the workshops as directed.

The Unit has been aligned to the National Occupational Standards (NOS). Candidates should be encouraged to try and achieve the tolerances laid down by the NOS.

For the practical Outcomes candidates could be given a block of stone which was sawn on six sides then they have to cut a splay using hand held tools. The splay should be returned to an external and an internal mitre.

Candidates could then cut a surface finish to a flat stone face which could be broached finish. It is imperative that the practitioner demonstrates the correct sequence of roughing down a stone and the correct tools to use.

The assessment of Outcome 3 and 4. Candidates could be presented with an assignment brief from which they will investigate and evaluate the use of building stones. The brief could be on a listed building or a building of historical significance.

Opportunities for developing Core Skills

The following grid provides a general guide to opportunities for the development of Core Skills in this Unit. Opportunities for the development of Core Skills at the output level are more fully identified in the Core Skills Sign Posting Guide.

Higher National Unit specification: support notes (cont)

Unit title: Conservation Crafts: Stonemasonry Skills

Core Skill (level 5)	Outcome 1	Outcome 2	Outcome 3	Outcome 4
1 Communication				
Reading			SCQF level 5	SCQF level 5
Writing			SCQF level 5	SCQF level 5
Oral	SCQF level 5	SCQF level 5		
2 Numeracy				
Using Number	SCQF level 5	SCQF level 5		
Using Graphical Information	SCQF level 5	SCQF level 5		
3 IT				
Using Information Technology			SCQF level 5	SCQF level 5
4 Problem Solving				
Critical Thinking			SCQF level 5	SCQF level 5
Planning and Organising			SCQF level 5	SCQF level 5
Reviewing and Evaluating			SCQF level 5	SCQF level 5
5 Working with others	SCQF level 5	SCQF level 5		

Open learning

As teaching and learning for Outcomes 1 and 2 involve practical tasks and specialist equipment and tools they are not suited to delivery by distance learning. These Outcomes require candidates to be observed and questioned by practitioners. The delivery and assessment of Outcomes 3 and 4 could be facilitated by on-line and blended learning.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

General information for candidates

Unit title: Conservation Crafts: Stonemasonry Skills

This Unit is about you learning and gaining an insight into the craft of Stonemasonry and how to use hand held masonry tools.

On completion of the Unit you should be able to:

- 1 Cut a splay moulding on a stone.
- 2 Produce a traditional surface finish on a stone.
- 3 Examine properties and characteristics of building stones.
- 4 Examine the geological classification of building stones.

In Outcome 1 and 2 you will learn and be expected to demonstrate good hand skills in cutting a splay moulding and a surface finish as hands on task in a workshop environment. All tasks will give a required tolerance to be achieved. The work will also entail the forming of external and internal mitre.

In Outcome 3 you will acquire knowledge on building stones and their formation used in the construction of buildings.

In Outcome 4 you will acquire knowledge on how correct bedding will affect the durability of stone and its components.

Assessment will take the form of an assignment brief from which you will investigate and evaluate the use of building stones. The brief could be on a listed building or a building of historical significance. Assessment of Outcome 1 and 2 will be by direct observation for the practical content of the Unit.