



## **National Unit specification: general information**

**Unit title:** Stonemasonry: Cutting and Building Wrought Stone  
(SCQF level 6)

**Unit code:** H0RW 12

**Superclass:** TG

**Publication date:** March 2012

**Source:** Scottish Qualifications Authority

**Version:** 01

## **Summary**

This Unit is suitable for candidates working towards a Modern Apprenticeship in Stonemasonry and will develop the candidates' craft skills in cutting and building wrought stone Units. This Unit is designed to provide candidates with competence in the use of tools and equipment to set out, cut and build wrought stone and the ability to apply these skills in the workplace. It is also designed to enable candidates to develop their skills and understand and use stonemasonry terminology, techniques and practices, produce working drawings and cut, set out and build wrought stone.

## **Outcomes**

- 1 Demonstrate knowledge and understanding of terminology, components and construction practices used in wrought stonework.
- 2 Produce and apply template from a given specification.
- 3 Plan, organise and cut stone from given specification.
- 4 Set out and build wrought stone.

## **Recommended entry**

While entry to this Unit is at the discretion of the centre, candidates undertaking the Professional Development Award in stonemasonry at SCQF level 6 must meet the requirements of the Modern Apprentices which include being employed in the relevant craft industry.

## General information (cont)

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### Credit points and level

1 credit at SCQF level 6 (6 SCQF credit points at SCQF level 6\*)

*\*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.*

### Core Skills

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill                      None

Core Skill component                      Critical Thinking @ SCQF level 4

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit Specification.

## **National Unit specification: statement of standards**

**Unit title:** Stonemasonry: Cutting and Building Wrought Stone  
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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

### **Outcome 1**

Demonstrate knowledge and understanding of terminology, components and construction practices used in wrought stonework.

#### **Performance Criteria**

- (a) Identify and select terminology related to pilasters, columns and buttresses.
- (b) Identify and select setting out techniques correctly.
- (c) Identify and explain construction practices correctly.

### **Outcome 2**

Produce and apply template from a given specification.

#### **Performance Criteria**

- (a) Produce template from a given specification.
- (b) Apply template correctly to stone.
- (c) Scribe template on a block of stone.
- (d) Comply with current Health and Safety requirements during all work methods and activities.

### **Outcome 3**

Plan, organise and cut stone from given specification.

#### **Performance Criteria**

- (a) Plan work in accordance with the given specification.
- (b) Organise work in accordance with the given specification.
- (c) Cut stone to given specification.
- (d) Comply with current Health and Safety requirements during all work methods and activities.

## **National Unit specification: statement of standards (cont)**

**Unit title:** Stonemasonry: Cutting and Building Wrought Stone  
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### **Outcome 4**

Set out and build wrought stone.

#### **Performance Criteria**

- (a) Set out wrought stone in accordance with the given specification.
- (b) Build wrought stone in accordance with the given specification.
- (c) Secure fixings in accordance with given specification.
- (d) Point, clean and protect stone in accordance with the given specification.
- (e) Comply with current Health and Safety requirements during all work methods and activities.

#### **Evidence Requirements for this Unit**

These Evidence Requirements will be met by the completion of the Stonemasonry Training and Assessment Programme (TAP).

Evidence is required to demonstrate that the candidate has achieved this Unit to the standard specified in all Outcomes and Performance Criteria.

Written and/or oral recorded evidence is required to demonstrate that the candidate has achieved the knowledge elements of Outcome 1 to the standard specified in the Performance Criteria. Candidates will be required to demonstrate their knowledge of terminology, techniques and practices by defining terms, describing setting out techniques and identifying required construction practices. Assessment will take the form of a question paper which will be carried out under closed-book, controlled, supervised conditions.

Product and performance evidence is required to demonstrate that the candidate has achieved all Outcomes 2 to 4 to the standards specified in the Performance Criteria. Candidates will be required to build and cut a wrought stone pillar and secure all fixings. Assessment of these Outcomes will be evidenced through observation of work processes and assessment of completed work pieces. Candidates must meet the given standards and tolerances during the practical assessments. An assessor observation checklist must be used to record this evidence. Assessment should be conducted under controlled, supervised conditions. Assessment of these Outcomes will be carried out in a workshop under controlled supervised conditions.

## National Unit specification: statement of standards (cont)

**Unit title:** Stonemasonry: Cutting and Building Wrought Stone  
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**Outcomes 2, 3, 4**

<b>Summary of standards (working towards industrial tolerances)</b>	
<b>Item (Building)</b>	<b>Measurement of standard</b>
Setting out height	±10 mm
Level	±5 mm
Plumb	±5 mm
Joint thickness 4mm	±2 mm
Flush pointing	Neat flush finish
<b>Item (Cutting)</b>	
Minimum stone size	400 mm x 280 mm x 200 mm
Cyma-recta.60 mm x.60mm	±1 mm
Fillets 10 mm x 10mm	2 spalls no more than 10 mm
<b>Templates (Producing &amp; Applying)</b>	
Produce templates correctly	±1 mm
Applies templates correctly	±1 mm
Health and safety	Complies at all times
Risk Assessment	Safety boots worn at all times Hard hat worn at all times High visibility vest worn at all times All other PPE as risk assessed
Method Statement	Working area kept clean at all times Materials stacked correctly at all times Tools handled correctly at all times Tools cleaned and stored safely at end of working day

## **National Unit specification: support notes**

**Unit title:** Stonemasonry: Cutting and Building Wrought Stone  
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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 developed as a mandatory Unit in the Professional Development Award in Stonemasonry at SCQF level 6.

The successful completion of this Unit will provide candidates with the required underpinning knowledge and skills relating to both, setting out techniques and construction practices associated with cutting and building a wrought stone pillar in stone.

This Unit should be offered to candidates from the construction and related services industries. The skills and knowledge and understanding are transferable within different working environments but the Unit is primarily aimed at candidates whose normal place of work would be a site, workshop, or similar environment.

The Unit deals with cutting and building wrought stone. It should be delivered as part of a structured programme of training and orientated to the context of the candidate's work and area of responsibility.

Health and safety and sustainability are integral and key to the construction Industry therefore throughout the Unit emphasis will be placed where appropriate on the application of health and safety and sustainability. Safety working practices should be looked at in accordance with current safety codes of practice and regulations. Sustainability should include reference to criteria affecting sustainability, impact of not implementing sustainability on the environment and the legislation promoting sustainability.

### **Guidance on learning and teaching approaches for this Unit**

The candidate should be given the opportunity to further develop the skills of stone cutting, bed spreading and jointing stone techniques used in the Stonemasonry craft. The use of a spirit level should be encouraged for plumbing the wrought stone. The terms used for wrought stone cutting and construction of, should be integrated to the practical task/test as it is undertaken, and the basic principles of such explained as the assessment is being built.

This teaching approach should ensure the candidate is acquiring the underpinning knowledge required for the Unit. Teachers/Lecturers should demonstrate practical elements step by step until they feel that the candidate is competent to attempt tasks under assessment conditions. Effective questioning should be encouraged throughout, focusing on skills construction practices and underpinning knowledge related to fixing and building wrought structures.

It is recommended that this Unit be delivered in order of Outcomes as the order stated in the Statement of Standards.

## National Unit specification: support notes (cont)

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Opportunities should be taken throughout delivery of this Unit to meet the requirements of the generic Units of the Training and Assessment Programme including:

- ◆ Conform to General Workplace Health, Safety and Welfare
- ◆ Confirm Work Activities and Resources for the Work
- ◆ Develop and Maintain Good Working Relationships
- ◆ Confirm the Occupational Method of Work
- ◆ Conform to Productive Working Practices
- ◆ Move, Handle or Store Resource.

### Guidance on approaches to assessment for this Unit

Detailed assessment materials for this Unit will be found in the Stonemasonry TAP. Centres may use the instruments of assessment which they consider to be most appropriate but are advised to use the Stonemasonry TAP which has been developed centrally by SQA. Any other instruments of assessment used must be comparable to the TAP and have been through prior verification.

The candidates' knowledge and understanding of terminology, techniques and construction practices of stonemasonry will be assessed through a question paper and conducted under controlled, supervised conditions.

Candidates should be given as much practise as possible in cutting and building techniques, prior to being set the assessments Evidence will be gathered for Outcomes 2, 3 and 4 through observation that the candidates have met the given standards and tolerances during the practical assessments. An assessor observation checklist can be used to record this evidence. Assessment should be conducted under controlled, supervised conditions.

### Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

## **National Unit specification: support notes (cont)**

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### **Opportunities for developing Core Skills**

Components of the Core Skill of Problem Solving such as planning and organising and critical thinking will be developed as candidates undertake this Unit. Candidates will need to take account of a range of factors in order to work efficiently and safely, such as the choice of tools, appropriate materials, safety issues, safety equipment and sustainability. Individual discussions with assessors will enhance the evaluation of efficient working practices.

There are opportunities for candidates to develop the Core Skill of Working with Others at SCQF level 4, particularly in Outcomes 4 as this practical assessment may be carried out working in pairs, as part of teaching and learning. Candidates can agree responsibilities and provide support and information to each other during the assessments. After assessment, they should be encouraged to consider how effectively they supported each other.

Opportunities also arise for candidates to develop the Core Skill of Information and Communication Technology at SCQF level 3 by researching Health and Safety legislation affecting their area of work.

Numeracy at SCQF level 4 could be developed through the interpretation of information from three dimensional working drawings and the practical use of calculation and measuring scales required for teaching and learning assessments for Outcome 2.

There will be opportunities for candidates to develop the Core Skill of Communication at SCQF level 4. As candidates complete practical tasks, they should be expected to communicate with others using the correct terminology, tone and style suited to the workplace.

This Unit has the Critical Thinking component of Problem Solving embedded in it. This means that when candidates achieve the Unit, their Core Skills profile will also be updated to show they have achieved Critical Thinking at SCQF level 4.

### **Disabled candidates and/or those with additional support needs**

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements)



## History of changes to Unit

Version	Description of change	Date

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