



National Unit specification: general information

Unit title: Stonemasonry: Prepare Templates and Moulds (SCQF level 6)

Unit code: H0RX 12

Superclass: TG

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Version: 01

Summary

This Unit is suitable for candidates working towards a Modern Apprenticeship in Stonemasonry and will develop the candidates craft skills in producing templates from full size drawings, bisection of lines and angles, drawing to scale, orthographic projection, profile recognition, Tracery, Ramp and Twist and stonemasonry geometry. This Unit is designed to provide candidates with competence in the use of tools and drawing equipment to set out and produce templates in various materials 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.

Outcomes

- 1 Produce annotated scale drawings of plane figures and bisection and perform scaling exercise.
- 2 Produce annotated scale drawings in first angle orthographic projection from three dimensional shapes.
- 3 Identify mouldings and profiles.
- 4 Produce full size drawings to given specifications.
- 5 Produce templates from existing stones.
- 6 Set out and draw to scale a range of tracery and ramp and twist.

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

0.5 credits at SCQF 6 (3 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 components	Critical Thinking @ SCQF level 4 Using Graphical Information @ 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

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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

Produce annotated scale drawings of plane figures, bi-section, and a scaling exercise.

Performance Criteria

- (a) Select and use equipment appropriate to the task.
- (b) Lay out drawing sheet with title panel as British Standard.
- (c) Set out and draw bisect lines and angles.
- (d) Set out and draw to scale a range of plane figures,
- (e) Perform scaling exercise.

Outcome 2

Produce annotated scale drawings in first angle orthographic projection from three dimensional shapes.

Performance Criteria

- (a) Select and use equipment appropriate to the task.
- (b) Lay out drawing sheet with title panel as British Standard.
- (c) Set out and draw to scale three dimensional shapes in isometric and orthographic projection.

Outcome 3

Identify mouldings and profiles.

Performance Criteria

- (a) Identify mouldings from given drawings
- (b) Identify profiles from given drawings.

Outcome 4

Produce full size drawings to given specifications.

Performance Criteria

- (a) Select and use equipment appropriate to the task.
- (b) Lay out drawing sheet with title panel as British Standard.
- (c) Set out and draw full size drawings to given specifications.

National Unit specification: statement of standards (cont)

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Outcome 5

Produce templates from existing stones.

Performance Criteria

- (a) Select and use equipment appropriate to the task.
- (b) Produce a joint template from an existing stone.
- (c) Produce a reverse template from an existing stone.

Outcome 6

Set out and draw to scale a range of tracery and ramp and twist.

Performance Criteria

- (a) Select and use equipment appropriate to the task.
- (b) Lay out drawing sheet with title panel as British Standard.
- (c) Set out and draw to scale a range of tracery and ramp and twist.

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.

Product evidence is required to demonstrate that the candidate has achieved all Outcomes to the standards specified in the Performance Criteria. Candidates will be required to produce templates and working drawings. Assessment of these Outcomes will be evidenced through observation of work processes and assessment of completed drawings. 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.

Outcomes 1, 2, 4 and 6

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Accuracy	±1 mm
Lettering	Neat and legible
Drawing sheet	Clean and free of smudges at all times
Drawing	Conforms to British standard
Health and safety	Complies at all times.

Outcome 5

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Full size joint template zinc or card	±1 mm
Full size reverse template zinc or card	±1 mm
Edges of template joint and reverse	Clean and sharp
Mark up templates	Seen work indicated
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

National Unit specification: support notes

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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 20 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 setting out techniques, drawing skills, profile recognition and template production.

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 setting out techniques, drawing skills, profile recognition and template production. 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.

National Unit specification: support notes (cont)

Unit title: Stonemasonry: Prepare Templates and Moulds (SCQF level 6)

Guidance on learning and teaching approaches for this Unit

The candidate should be given the opportunity to further develop the skills of drawing and template production techniques used in the stonemasonry craft. The use of drawing equipment should be encouraged for production of templates for a number of given specifications. The terms used for drawing and template production should be integrated to the practical assessments as they are undertaken, and the basic principles of such explained as the assessments are being produced. This 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 template production and drawing as a means of communication.

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

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 Practice
- ◆ Move, Handle or Store Resources

Guidance on approaches to assessment for this Unit

Detailed assessment materials for this Unit will be found in the Stonemasonry Training and Assessment Programme (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.

Candidates should be given as much practise as possible in drawing and template production prior to being set the assessment assessments Evidence will be gathered for Outcomes 1, 2, 4, 5 and 6 through production of templates and/or drawings. An assessor observation checklist can be used to record this evidence.

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.

National Unit specification: support notes (cont)

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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)*.

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 Outcome 5 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 Core Skill at SCQF level 4 will be developed through the interpretation of information from 3 dimensional working drawings and the practical use of calculation and measuring scales required for teaching and learning assessments for Outcomes 1, 2 and 6

There will be opportunities for candidates to develop Core Skill of *Communication* at SCQF level 4. Candidates will have the opportunity to develop written and/or oral communication skills for the knowledge part of the assessment for Outcomes 1, 2, 3, 4 and 6. 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 and the Using Graphical Information component of Numeracy 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 and Using Graphical Information at SCQF level 4.

National Unit specification: support notes (cont)

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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

History of changes to Unit

Version	Description of change	Date

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