



National Unit specification: general information

Unit title: Stonemasonry: Produce Complex Mouldings to Mitre and Ashlar Stop (SCQF level 6)

Unit code: H0TW 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 candidate's craft skills in cutting complex mouldings with mitres to an ashlar stop. This Unit is designed to provide candidates with competence in the use of tools and equipment to cut complex mouldings with mitres to ashlar stops and produce moulding on a radius 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 a job card and templates.

Outcomes

- 1 Demonstrate knowledge and understanding of terminology, template production techniques and construction practices used in producing complex mouldings.
- 2 Produce a straight through mould with returns to ashlar stop.
- 3 Produce a moulding on a radius to an ashlar stop.
- 4 Produce a plinth returned to ashlar stop with internal and external mitres.

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)

Unit title: Stonemasonry: Produce Complex Mouldings to Mitre and Ashlar Stop (SCQF level 6)

Credit points and level

2 credits at SCQF level 6 (12 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: Produce Complex Mouldings to Mitre and Ashlar Stop (SCQF level 6)

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, template production techniques and construction practices used in producing complex mouldings.

Performance Criteria

- (a) Identify and select terminology related to template production and application.
- (b) Identify and select setting out techniques correctly.
- (c) Identify and explain construction practices correctly.

Outcome 2

Produce a straight through mould with returns to ashlar stop.

Performance Criteria

- (a) Produce templates correctly.
- (b) Produce a job card.
- (c) Produce a straight through moulding with returns to ashlar stops.
- (d) Comply with current Health and Safety requirements during all work methods and activities.

Outcome 3

Produce a moulding on a radius.

Performance Criteria

- (a) Produce templates correctly.
- (b) Produce moulding on a radius in accordance with the given specification.
- (c) Form internal mitres in accordance with the 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: Produce Complex Mouldings to Mitre and Ashlar Stop (SCQF level 6)

Outcome 4

Produce a plinth returned to ashlar stop.

Performance Criteria

- (a) Produce templates correctly.
- (b) Produce a plinth returned to ashlar stop in accordance with the given specification.
- (c) Produce external mitre in accordance with given specification.
- (d) 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 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 including tracery, ramp and twist and spheres. Assessment will take the form of a question paper which will be carried out under open-book, controlled, supervised conditions.

Product and performance evidence is required to demonstrate that the candidate has achieved Outcomes 2, 3 and 4 to the standards specified in the Performance Criteria. Candidates will be required to cut a complex moulding on a stone and produce all template required. 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: Produce Complex Mouldings to Mitre and Ashlar Stop (SCQF level 6)

Outcome 2

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Stone size	250 mm x 400 mm x 250 mm
Cut Templates correctly	±1 mm
Fillets cut 10 mm	±1 mm
Cavetto 40 mm	±1 mm
Ovolo 60 mm	±1 mm
Templates (joint and reverse)	±1 mm
Mouldings cut 145 mm x 110 mm	±1 mm
Trueness (joint, reverse, bed)	±1 mm
External mitres	±1 mm
Ashlar stop	±1 mm

Outcome 4

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Stone size	Minimum 125 mm 400x 200
Cut templates correctly joint, reverse, bed	±1 mm
Fillets 10 mm x 10 mm	±1 mm
Cavetto 30 mm	±1 mm
Cyma-recta 45 mm x 35 mm	±1 mm
Templates (bed, reverse, joint)	±1 mm fully annotated and referenced
All mouldings cut	±1 mm
Trueness joint, reverse, bed	±1 mm
External mitres 2	±1 mm
Ashlar stop	±1 mm

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
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: Produce Complex Mouldings to Mitre and Ashlar Stop (SCQF level 6)

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 80 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 cutting complex mouldings 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 complex mouldings returned to an ashlar stop and return moulding with fillets. 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: Produce Complex Mouldings to Mitre and Ashlar Stop (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 stone cutting techniques used in the Stonemasonry craft. The terms used for cutting complex mouldings and template production should be integrated to the practical assessments as it is undertaken, and the basic principles of such explained as the work pieces are being produced. 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 produce mouldings.

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 Practices
- ◆ 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 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 candidate's knowledge and understanding of terminology, template production techniques and construction practices used in producing complex mouldings, to include Tracery, Ramp and Twist and Spheres will be assessed through a question paper

Candidates should be given as much practise as possible in cutting complex mouldings prior to being set the assessment. 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 tasks/tests. An assessor observation checklist/record can be used to record this evidence.

National Unit specification: support notes (cont)

Unit title: Stonemasonry: Produce Complex Mouldings to Mitre and Ashlar Stop (SCQF level 6)

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 Outcomes 2, 3 and 4 as this practical assessment may be carried out individually but working in pairs when lifting and man handling stone Units, 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 skills will 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 Outcomes 2, 3 and 4.

There will be opportunities for candidates to develop the 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 Outcome 1. 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.

National Unit specification: support notes (cont)

Unit title: Stonemasonry: Produce Complex Mouldings to Mitre and Ashlar Stop (SCQF level 6)

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

© Scottish Qualifications Authority 2012

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this Unit specification can be purchased from the Scottish Qualifications Authority. Please contact the Business Development and Customer Support team, telephone 0303 333 0330.