



National Unit specification

General information

Unit title: Stonemasonry: Practical Drawing and Template Production (SCQF level 5)

Unit code: HA2Y 45

Superclass: TG

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Unit purpose

This Unit is suitable for learners with no experience in the subject area and introduces learners to drawing and template production used in stonemasonry. Designed to develop the learner's ability to produce basic stonemasonry drawings and templates required for the production of worked and moulded stone. It also develops knowledge and awareness of the various materials, tools and equipment used in the stonemasonry craft.

Throughout this Unit, learners will develop the skills to identify any potential hazards and will adhere to health and safety, sustainability and waste management regulations and legislation at all times.

Outcomes

On successful completion of the Unit the learner will be able to:

- 1 Identify and select tools and equipment required to produce templates for stone.
- 2 Draw basic moulded features using drawing instruments.
- 3 Produce basic templates for use on stone.

Credit points and level

1 National Unit credit at SCQF level 5: (6 SCQF credit points at SCQF level 5)

Recommended entry to the Unit

While entry is at the discretion of the centre, basic numeracy, communication and problem solving would be beneficial.

National Unit specification: General information (cont)

Unit title: Stonemasonry: Practical Drawing and Template Production
(SCQF level 5)

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

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.

Equality and inclusion

This Unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

National Unit specification: Statement of standards

Unit title: Stonemasonry: Practical Drawing and Template Production
(SCQF level 5)

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

Identify and select tools and equipment required to produce templates for stone.

Performance Criteria

- (a) Identify drawing equipment required to produce basic construction drawings.
- (b) Select tools required to produce templates in Plastic and Zinc.
- (c) Select template material suitable for a stone project.
- (d) Identify classic stone moulds and profiles.
- (e) Determine quantities of materials required for a given task.

Outcome 2

Draw basic moulded features using drawing instruments.

Performance Criteria

- (a) Draw basic full size profiles of Cavetto, Ovolo, Cyma Recta, Cyma Reversa, Torus, Corona and Scotia.
- (b) Draw profiled section drawings for two given stone projects.
- (c) Fully annotate each part and include reverse requirements.
- (d) Include all the relevant BS information in a title box.
- (e) Handle, use and store equipment correctly and safely.

Outcome 3

Produce basic templates for use on stone.

Performance Criteria

- (a) Produce a joint template in Plastic.
- (b) Produce a reverse template in Plastic.
- (c) Produce a joint template in Zinc.
- (d) Produce a reverse template in Zinc.
- (e) Include the relevant information in the templates.
- (f) Handle, use and store equipment correctly and safely.

National Unit specification: Statement of standards (cont)

Unit title: Stonemasonry: Practical Drawing and Template Production (SCQF level 5)

Evidence Requirements for this Unit

Learners must adhere to relevant Health and Safety regulations and legislation relating both to working practices within the construction environment, as well as those specific to any practical task they are requested to carry out (such as emphasising the importance of selecting and using the correct PPE at all times).

Evidence is required to demonstrate that learners have achieved all Outcomes and Performance Criteria.

For Outcome 1 written and/or oral recorded evidence is required to demonstrate learners' knowledge of basic stonemasonry tools and equipment required to draw and produce basic templates for stone banker work, that being work carried out on a banker table, with traditional stonemasonry tools and materials. Assessment will be conducted under controlled, closed-book, supervised conditions.

For Outcome 2 and 3 Product evidence is required to demonstrate that the learner has achieved these Outcomes to the standards specified in the Performance Criteria. Learners will be required to produce drawings and templates required in Stonemasonry projects. Assessment of these Outcomes will be evidenced through observation of work processes and assessment of completed drawings and templates. Learners 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.

An example of the standards required for the observation checklist in Outcome 2 and 3 are listed but can be devised by the centre based on the work model, materials specification and health and safety requirements:

Outcome 2

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Full size profiles of Cavetto, Ovolo, Cyma Recta, Cyma Reversa, Torus, Corona and Scotia.	+/- 2 mm
2 x Stone section profiles	Yes/No
Fully annotated	Yes/No
Fully completed British Standard (BS) title box	Yes/No
Drawing sheets	Clean with minimal smudging
Adhere to health and safety requirements at all times	Yes/No

National Unit specification: Statement of standards (cont)

Unit title: Stonemasonry: Practical Drawing and Template Production (SCQF level 5)

Outcome 3

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Produce a joint template in Plastic	+/-2 mm
Produce a reverse template in Plastic	+/-2 mm
Produce a joint template in Zinc	+/- 2 mm
Produce a reverse template in Zinc	+/- 2 mm
All edges clean	Yes/No
Include the relevant information on the templates	Yes/No
Handle, use and store equipment correctly and safely.	Yes/No
Risks assessed	Yes/No

At all times learners must comply with current health, safety and welfare, sustainability and waste management requirements and legislation. This includes the selection and use of appropriate personal protective equipment.



National Unit Support Notes

Unit title: Stonemasonry: Practical Drawing and Template Production (SCQF level 5)

Unit Support Notes are offered as guidance and 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

The content and context of this Unit is aimed at learners who are interested in pursuing a career in the craft of Stonemasonry.

The learner successfully completing this Unit will be given knowledge and understanding in the selection and use of tools and equipment required in stonemasonry to produce templates in a variety of media. They will also demonstrate the ability to recognise and produce common roman profile mouldings in drawn format that can be transferred to template mediums of both Plastic and Zinc. Production of template profiles will show the learners have the ability to produce basic sections for the use in banker stonemasonry. Banker masonry requires detailed and accurate templates for the successful production of hewn elements in stone.

The learning environment for this Unit will be a combination of classroom and workshop based learning. The knowledge element and drawn element of this Unit would be taught in a classroom environment and put into practice in the workshop in conjunction with practical Outcomes.

The content of the Unit is set at an introductory level so that learners can develop basic knowledge and understanding of basic templates, their production and use in a construction environment and can be used as a progression pathway into a Vocational Qualification in Stonemasonry.

Health and safety, sustainability and waste management are vital to working practices within the construction industry. Wherever appropriate during the delivery of this Unit, an emphasis will be placed on the correct application of health and safety, sustainability and waste management principals and processes, in accordance with current codes of practice and legislation.

This Unit does not fully comply with the following National Occupational Standard although does contain elements of:

COSVR187 — Produce Standard Templates and Moulds

National Unit Support Notes (cont)

Unit title: Stonemasonry: Practical Drawing and Template Production (SCQF level 5)

Guidance on approaches to delivery of this Unit

The introductory training for this Unit should take place in a separate training area independent of the productive work environment and using dedicated equipment and resources. This should cover underpinning knowledge of basic roman mouldings in stone, basic drawing techniques and graphic communication principles. An understanding of the need for templates in working stone and how these can be produced accurately should be fully demonstrated through training exercises before the learner carries out any practical application of knowledge in assessment format.

For all Outcomes, delivery should be set at introductory level and note that most students may be inexperienced to workplace or hazardous environments, so Health and Safety should be strictly adhered to. Any potential hazards and risks should be conveyed to all learners/learners.

All knowledge element Outcomes can be delivered in a classroom environment with quality and up to date resources. A site visit to look at a variety of moulded worked stone in an architectural stone context would be beneficial, but not necessary.

For all practical based drawing and template production activities a learner centred learning and teaching approaches are encouraged with learners actively participating in practical drawing activities after lecturer demonstration of key drawing practices and principles. Emphasis should be placed on the importance of being able to keep the drawing sheet clean, pencils sharp and accuracy in the marking out and transfer of given dimensions and information.

Guidance on approaches to assessment of this Unit

Centres may use the method of assessment which they consider to be most appropriate but are encouraged to use the Training Assessment Programme (TAP) developed centrally by SQA. It is expected that learners will have to demonstrate current knowledge and understanding of safe working practice and risk assessment methods, etc prior to being set the assessment tasks.

Knowledge and Understanding of the processes involved in *Stonemasonry: Practical Drawing and Template Production (SCQF level 5)* should be assessed before any practical assignments are carried out by learners. This will include assessment of a learner's ability to prepare the work area for laying modular pavement.

Practical assignments should be carried out under supervised conditions and recorded in an assessor observation/operational checklist. Assessments should confirm that a learner has the ability to safely lay modular pavement using designated machinery or equipment correctly and safely, whilst adhering to current statutory Health and Safety regulations and legislation.

National Unit Support Notes (cont)

Unit title: Stonemasonry: Practical Drawing and Template Production (SCQF level 5)

Adherence to current statutory working regulations and Health and Safety procedures will be observed during the practical exercise carried out by the learner towards all Outcomes.

Detailed assessment material for this Unit will be found in the relevant 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 TAP which has been developed centrally by SQA. Any other instruments of assessment used must be comparable to the TAP and have been prior verified.

Opportunities for 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 learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

Components of the Core Skill of *Problem Solving* at SCQF level 5, Critical Thinking and Planning and Organising, may be developed as learners undertake this Unit. Learners will need to take account of a range of factors in order to work efficiently and safely, such as the interpretation of drawings, choice of tools and appropriate materials, application of scientific principles, risk assessments, health, safety and welfare and a sustainable approach. Individual discussions with tutors may enhance the evaluation of productive work practices.

There are opportunities for learners to develop the Core Skill of *Numeracy* at SCQF level 5 and could be enhanced through the knowledge evidence in the calculation of materials interpretation of information and measuring.

There are opportunities for learners to develop the Core Skill of *Communication* at SCQF level 5. As learners complete practical tasks they need to communicate effectively with others using the correct terminology, tone and style suited to the workplace.

History of changes to Unit

Version	Description of change	Date

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General information for learners

Unit title: Stonemasonry: Practical Drawing and Template Production (SCQF level 5)

This section will help you decide whether this is the Unit for you by explaining what the Unit is about, what you should know or be able to do before you start, what you will need to do during the Unit and opportunities for further learning and employment.

This Unit is an introduction to practical drawing and template production in Stonemasonry, the craft of being able to build natural stone and work natural stone into geometric shapes typically undertaken in the Construction and Repair and Maintenance sectors.

This Unit will develop your ability to identify and select tools and equipment required to produce templates for stone banker work, draw basic moulded features often seen in traditional roman and classic architecture and produce working templates that are suitable for working of stone moulded elements in the stonemasonry craft.

This Unit is suitable if you wish to gain a basic understanding and knowledge of stonemasonry drawing and template production work through knowledge and understanding and practical tasks and assessments.

On completion of this Unit you will be able to:

- 1 Identify and select tools and equipment required to produce templates for stone.
- 2 Draw basic moulded features using drawing instruments.
- 3 Produce basic templates for use on stone.

Assessment is through closed-book multiple-choice questions and in the completion of practical assignments.

Elements of Core Skills; *Problem Solving, Numeracy and Communication* will be developed in successful completion of this Unit, but they will not be assessed or certified.

This Unit is valuable in the potential for development of employability and citizenship in the new build and repair and maintenance construction sectors. Employers are actively seeking learners that can demonstrate relevant knowledge, understanding and competency, which can be gained in the completion of this Unit.