



National Unit specification: general information

Unit title: Construction Crafts: Stonemasonry

Unit code: FF33 10

Superclass: TG

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Summary

This Unit is suitable for candidates with no previous stonemasonry experience. The Unit is based on practical workshop activities such as setting out simple coursed rubble wall, selecting and maintaining tools, producing surface finishes and building short lengths of coursed rubble walls. Candidates will also develop safe working practices and general skills which will enhance employability. The stone to be used can either be sandstone or limestone. For centres with dust extraction facilities available then either stone can be used, if not then limestone should be used.

The Unit is an optional Unit in the Intermediate 1 Construction Crafts Course but can also be taken as a free-standing Unit. Candidates who achieve this Unit should feel confident in progressing to further Units in stonemasonry at Intermediate 1 or Intermediate 2.

Outcomes

- 1 Select, use and maintain basic stonemasonry tools and equipment.
- 2 Select and use tools to produce surface finishes.
- 3 Measure and set out a coursed rubble wall with dressed corner stones.
- 4 Build a coursed rubble wall with dressed corner stones.

Recommended entry

Entry is at the discretion of the centre.

National Unit specification: General information (cont)

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Credit points and level

0.5 National Unit credit at SCQF level 4: (3 SCQF credit points at SCQF level 4*)

**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* at SCQF level 4

There are also opportunities to develop aspects of the Core Skills of *Communication*, *Problem Solving* and *Working with Others* in this Unit, although there is no automatic certification of these Core Skills or Core Skills components.

Opportunities for developing aspects of Core Skills are highlighted in *Guidance on Learning and Teaching Approaches for this Unit*.

National Unit specification: statement of standards

Unit title: Construction Crafts: Stonemasonry

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

Select, use and maintain basic stonemasonry tools and equipment.

Performance Criteria

- (a) The selection of tools and equipment is appropriate for the work to be done.
- (b) The tools are used in the correct manner.
- (c) The tools are used solely for the purpose which they are intended.
- (d) The tools are cleaned, maintained and stored correctly.
- (e) Health and safety requirements are complied with during all activities.

Outcome 2

Select and use tools to produce surface finishes.

Performance Criteria

- (a) The selection of tools is appropriate for the work to be done.
- (b) Surface finishes are set out in accordance with the specification.
- (c) Surface finishes are produced in accordance with the specification.
- (d) Health and safety requirements are complied with during all activities.

Outcome 3

Measure and set out a coursed rubble wall with dressed corner stones.

Performance Criteria

- (a) The wall is measured accurately and to the prescribed tolerance.
- (b) The bond is set out correctly in accordance with good practice.
- (c) The levels at both ends are established in accordance with good practice.
- (d) Health and safety requirements are complied with during all activities.

National Unit specification: statement of standards (cont)

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Outcome 4

Build a coursed rubble wall with dressed corner stones.

Performance Criteria

- (a) The wall is built in accordance with given working drawings.
- (b) The wall is built to the prescribed standards and tolerances.
- (c) The wall is pointed and finished in accordance with the specification.
- (d) A quality check is carried out on the finished work against the prescribed standards and tolerances.
- (e) Health and safety requirements are complied with during all activities.

Evidence Requirements for this Unit

Performance evidence is required to show that all Outcomes and Performance Criteria have been achieved.

Performance evidence will be supported by an assessor checklist. This evidence will be generated from an integrated assignment consisting of practical activities carried out in supervised workshop conditions. The evidence may be gathered at different points throughout the Unit. The practical activities will cover:

- ◆ choosing the correct tools for particular tasks, using these tools in a correct and safe manner, using them solely for the purpose for which they are designed, and cleaning and storing them correctly after use
- ◆ measuring out accurately, setting out the shape of the wall, setting out the correct bond and establishing levels at ends of the walls
- ◆ building basic walls working from information given on three-dimensional drawings:

The coursed rubble walls will include:

- a straight wall with dressed corner stones
- a tooled margin surface finish on each corner stone
- a broached surface finish on each corner stone
- walls that are built within the stated tolerances
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ candidates maintaining a clean and tidy workplace and adhering to health and safety requirements throughout all activities.

National Unit specification: statement of standards (cont)

Unit title: Construction Crafts: Stonemasonry

It is suggested that candidates work together, ideally in pairs, to complete Outcomes 3 and 4. Where it is not feasible to work in pairs, small groups (comprising a minimum of two candidates) should be formed.

The National Assessment Bank item (NAB) for this Unit provides an assessor checklist and details of the practical assignment which exemplify the national standard. Centres wishing to develop their own assessments should refer to the NAB to ensure a comparable standard.

National Unit specification: support notes

Unit title: Construction Crafts: Stonemasonry

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

The content in this Unit covers practical stonemasonry activities at an introductory level. The candidate is required to develop the ability to select and use tools correctly and safely. It is therefore important that the learning takes place in a supervised workshop/site environment. Basic safe working practices will be included in the content as it is important that candidates learn to adhere to these at all times.

During the process of practical work the candidate will become accustomed to the use of stonemasonry terms and will be able to demonstrate knowledge and understanding of these terms in everyday practice. The main content of the Unit will be learning the preparatory tasks and skills required in measuring and setting out coursed rubble walls, using stonemasonry tools to apply or strike two different tooled finishes onto a stone surface, and the skills and techniques used in building small-scale coursed rubble walls. In keeping with the level of the Unit, cutting (to change the shape of stone) is not covered. Candidates should be taught good working practices at each stage and should learn how to carry out a quality check on their own work on completion.

Candidates should be encouraged to use and develop techniques suited to their own physical strength and abilities, eg use of small trowels to spread mortar, use of short lengths of coursed rubble and small course heights.

In addition to the vocational content, candidates should be encouraged to focus on the general skills and attitudes which employers value. These should be taught as an integral part of the Unit. Opportunities will arise in various practical contexts to discuss the value of, for example: time-keeping; working co-operatively; taking advice; maintaining a clean, tidy and organised workplace; planning and thorough preparation. The context for learning should include the requirement to be clean, presentable and appropriately dressed for the workshop, wearing personal protective equipment (high-visibility vests, steel-toed boots, dust masks, gloves, eye protection glasses and overalls) when required.

Relevant aspects of current health and safety legislation and any systems of work relevant to the candidates' workshop/workplace should be explained and adhered to as part of the work of this Unit.

National Unit specification: support notes (cont)

Unit title: Construction Crafts: Stonemasonry

Employability Skills

On completion of this Unit the candidate will have had opportunities to develop the following employability skills:

- ◆ timekeeping
- ◆ attendance
- ◆ following instructions
- ◆ taking advice and dealing with constructive feedback
- ◆ maintaining a tidy work area
- ◆ working co-operatively with others
- ◆ planning and preparation*
- ◆ checking quality of own work*
- ◆ positive attitude to learning
- ◆ review and self-evaluation
- ◆ awareness of health and safety issues*
- ◆ interpretation of graphic information*

Achievement in a number of these employability skills (those marked with an asterisk) will be clearly identified as a result of the evidence generated through the assessment activities for this Unit. There are opportunities to develop the remaining skills.

Guidance on learning and teaching approaches for this Unit

Experiential learning is the main approach recommended for this Unit. This involves learning through practical experiences and activities. Candidates should experience workplace conditions and should be encouraged to perform tasks and conduct themselves in a manner appropriate to the workplace.

Experiential learning also involves reflecting on experiences/activities, identifying strengths and areas for improvement. It is important to encourage candidates throughout the Unit to evaluate their own work and progress. They should be encouraged to seek advice and set themselves goals to build competence and confidence in undertaking tasks.

In this Unit there are many opportunities to build up an understanding of the workplace ethos and the behaviours and practice required of employees and employers. Checking standards of work against prescribed tolerances is a very useful skill and habit that candidates can develop during their work. For example, learning how to use a spirit level for checking stonework for level and plumb against tolerances would be helpful for candidates. The construction industry is very keen on producing work that is 'right first time' and quality checks are an inherent part of the work in the industry. Candidates can be encouraged to approach their work with care and build in a checking process as part of good practice.

National Unit specification: support notes (cont)

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Responsible, safe behaviour in the workplace can be demonstrated and practised as part of the routine essential work for example: candidates will learn that a build up of stone debris around the workspace could be a tripping hazard; they will learn how to use hand tools and equipment in a safe manner and how to clean and maintain them; daily routines in the workplace will include maintaining a clean and tidy workspace.

Opportunities for developing aspects of Core Skills should be incorporated where they arise naturally in the teaching and learning process. In this Unit, candidates will make simple calculations in setting out stonework; they will also calculate lengths and heights in stone walls and check work against prescribed tolerances. These are good opportunities for developing aspects of numeracy.

Candidates will also read instructions for work activities, including the specifications of materials required for the practical activity; they will also take part in discussions with peers and tutors regarding work activities, interpretation of drawings, materials, use of tools and workshop protocol; and at all times, clear and courteous communication with their peers, supervisors and technicians will be needed on use of workspace, tools and health and safety issues. All of these activities present opportunities for developing aspects of communication skills.

Where this Unit is taken alongside the Unit *Construction Crafts: Employability Skills*, candidates will have additional opportunities to develop an awareness of the general employability skills and attitudes which employers value. Integrated activities will involve the candidate assessing his/her own performance on time-keeping, attendance, taking instructions, seeking advice, planning and preparation, working co-operatively with others and general attitude. Candidates will also seek the views of tutors/supervisors and will identify areas for improvement and take responsibility for action plans. These activities will add value to the candidate's experience and help to enhance employability.

Opportunities for developing Core Skills

Achievement of this Unit gives automatic certification of the Core Skill component of *Critical Thinking* at SCQF level 4. There are also opportunities to develop aspects of the Core Skills of *Communication*, *Problem Solving* and *Working with Others* in this Unit. As candidates complete practical tasks, they will be expected to communicate with others using the correct terminology, tone and style suited to the workplace. Candidates are required to check their own practical work against given standards and tolerances and are required to review and evaluate their work. As it is suggested that candidates work in pairs or small groups to complete Outcomes 3 and 4, they will need to agree responsibilities and provide support and information to one other during the assessment. After the assessment, they should be encouraged to consider how effectively they supported one other.

National Unit specification: support notes (cont)

Unit title: Construction Crafts: Stonemasonry

Guidance on approaches to assessment for this Unit

It is expected that candidates will be given as much practice as possible in stonemasonry techniques, prior to being set the assessment tasks. The National Assessment Bank item for the Unit details the quality and quantity of stonework to be produced for the Unit assessment. Tolerances required from the assessment task are significantly less stringent than those required by National Occupational Standards. Nevertheless, the use of tolerances in this way introduces candidates to the kind of quality regime they will experience if and when they pursue a career as a tradesperson in the construction industry.

An observation checklist should be used when gathering performance evidence. The NAB item for this Unit provides an observation checklist. Centres may develop their own instruments of assessment but these must be of a comparable standard to the NAB.

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 e-checklists. 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)*.

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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