



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

**Unit title:** Bricklaying: Set Out and Build Brickwork Masonry to Rake (SCQF level 6)

**Unit code:** H08Y 12

**Superclass:** TG

**Publication date:** December 2016

**Source:** Scottish Qualifications Authority

**Version:** 02

## **Summary**

This Unit is suitable for candidates working towards a Modern Apprenticeship in Bricklaying and will develop the candidates craft skills and knowledge in setting out and building raking masonry walling. This Unit is designed to provide candidates with competence in the use of tools and equipment to set out and build raking masonry and the ability to apply these skills in the workplace.

## **Outcomes**

- 1 Demonstrate understanding of terminology, components, resources and construction practice used in raking masonry.
- 2 Set out and build a decorative masonry cavity gable wall to rake
- 3 Set out and build a decorative solid masonry ramped wall

## **Recommended entry**

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

## **Credit points and level**

2 National Unit 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.

## **General information (cont)**

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(SCQF level 6)

### **Core Skills**

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

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

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

**Unit title:** Bricklaying: Set Out and Build Brickwork Masonry to Rake (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 understanding of terminology, components, resources and construction practice used in raking masonry.

#### **Performance Criteria**

- (a) Identify and select terminology related to raking masonry correctly.
- (b) Identify and select setting out techniques for raking masonry correctly.
- (c) Identify and select components, suitable resources and construction practices correctly.

### **Outcome 2**

Set out and build a decorative masonry cavity gable wall to rake

#### **Performance Criteria**

- (a) Set out wall in accordance with the given specifications.
- (b) Build wall in accordance with the given specifications, including insulation to full height of gable and tie back straps positioned as specified.
- (c) Comply with current Health and Safety requirements during all work methods and activities.

### **Outcome 3**

Set out and build a decorative solid masonry ramped wall

#### **Performance Criteria**

- (a) Set out wall in accordance with the given specifications.
- (b) Build wall in accordance with the given specifications.
- (c) Comply with current Health and Safety requirements during all work methods and activities.

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

**Unit title:** Bricklaying: Set Out and Build Brickwork Masonry to Rake (SCQF level 6)

### Evidence Requirements for this Unit

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

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

Written and/or recorded oral 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, components, techniques and practices by defining terms, describing setting out techniques and identifying required components and construction practices. This assessment will take the form of a question paper and will be conducted under controlled, closed-book and supervised conditions.

Product and performance evidence is required to demonstrate that the candidate has achieved Outcome 2 and Outcome 3 to the standard specified in the Performance Criteria. For Outcome 2 candidates will be required to set out and build a masonry gable wall in insulated cavity construction which includes decorative features and cut to rake.

For Outcome 3 candidates will be required to set out and build a ramped wall with decorative features of solid masonry construction in brickwork. Assessment of this Outcome will be evidenced through observation of work, processes and assessment of the completed work-piece. Candidates must meet the given standards during the practical assessment. An assessor observation checklist must be used to record this evidence. Assessment should be conducted under controlled, supervised conditions.

**Outcome 2** Set out and build a decorative masonry cavity gable wall to rake

<b>Summary of checklist standards (working towards industrial tolerances)</b>	
<b>Item</b>	<b>Measurement of standard</b>
Overall length	± 6mm
Gauge	± 5mm
Level	± 5mm
Plumb (all 10 points)	± 5mm
Square	± 3mm in 0.6m
Joint thickness	± 5mm
Faceplane (brickwork)	± 5mm
Raking cut line (brickwork)	± 3mm in 1m
Faceplace of raking cuts	± 3mm in 1m
Gauge of raking cuts to main wall	± 2mm
Cavity insulation ties	Positioned to manufacturer's instructions

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

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Perpends	No deviation exceeding 3mm
Faceplane (blockwork)	± 6mm
Plumb each point (blockwork)	± 5mm
Level (blockwork)	± 5mm
Gauge (blockwork)	± 5mm
Raking cut to blockwork	± 5mm in 1m
Cavity insulation slabs/batts	Positioned to manufacturer's instructions
Tie Back Straps	Positioned as specified
Face of bricks	Facework clean, minimal smudging, no visual defects
Brickwork round key finish	Full and neat
Blockwork flush from trowel	No open joints
Cavity	Clean with no ties bridged
Overall cavity wall width	± 6mm
Feature	Position as specified
String course	Clean, no major defects
Cutting to feature 45°	± 4mm
Block bonded quoin: blocks level	± 3mm
Block bonded quoin: face work	± 6mm
<b>Risk Assessment</b>	
Safety boots	Worn 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
<b>Method statement</b>	
Working area	Kept clear at all times
Materials	Stacked safely at all times
Tools (during working)	Handled correctly at all times
Tools (after work)	Cleaned and stored safely
<b>Sustainability</b>	
Waste	Kept to a minimum at all times.
Recycling	Materials recycled whenever possible.
Waste disposal	Waste disposed correctly/appropriately

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

**Unit title:** Bricklaying: Set Out and Build Brickwork Masonry to Rake (SCQF level 6)

**Outcome 3** Set out and build a decorative solid masonry ramped wall

<b>Summary of standards (working towards industrial tolerances)</b>	
<b>Item</b>	<b>Measurement of standard</b>
Overall length	± 5mm
Gauge	± 5mm
Level front and back of BOE	± 5mm
Plumb	± 5mm
Joint thickness	± 3mm
Faceplane all sides of pier and wall front face	± 5mm
Pier square bottom course	± 3mm
Pier level on all four sides	± 3mm
Reinforcement ties	Positioned as specified
(Pier) Brick-on-edge level on all four sides	± 2mm
(Pier) BOE regular joint thickness	± 3mm
Face of bricks	Clean, minimal smudging, no visual defects
(Pier) BOE facework	Good selection of bricks essential, clean, a little smudging permissible
BOE half bond	As specified
Perpends	No deviation exceeding 5mm
Plinth course	equal overhang ± 3mm
Raking cut to be in line	± 5mm
Faceplane of cuts to match existing wall	± 2mm
Gauge of raking cuts	± 2mm
Raking BOE correct rake	± 3mm
Raking BOE joint size	± 3mm
Raking BOE facework	Good selection of bricks essential, clean, a little smudging permissible
Recessed square jointing uniform depth	± 3mm
BOE mitres	Equal ± 5mm
Flemish bond	As specified
Stretcher bond	As specified
Working area	Clean at all times

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

**Unit title:** Bricklaying: Set Out and Build Brickwork Masonry to Rake (SCQF level 6)

<b>Risk Assessment</b>	
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
<b>Method statement</b>	
Working area	Kept clear at all times
Materials	Stacked safely at all times
Tools (during working)	Handled correctly at all times
Tools (after work)	Cleaned and stored safely
<b>Sustainability</b>	
Waste	Kept to a minimum at all times.
Recycling	Materials recycled whenever possible.
Waste disposal	Waste disposed correctly/appropriately

## National Unit specification: support notes

**Unit title:** Bricklaying: Set Out and Build Brickwork Masonry to Rake (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 Bricklaying 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 and construction practices associated with setting out and building masonry to rake.

This Unit would be offered to candidates working towards a Modern Apprenticeship in Bricklaying and will develop the candidate's skills in installing drainage. 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.

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 construction site or similar environment.

The Unit deals with setting out and building masonry Units to rake. 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. Aspects of this Unit could be integrated with *Bricklaying: Half Brick Walling* (SCQF level 6), *Bricklaying: Decorative Features* (SCQF level 6), *Bricklaying: Piers* (SCQF level 6), *Bricklaying: Cavity Walling* (SCQF level 6).

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

Candidates must be given the opportunity to further develop their skills in setting out and building ramps and walling cut to rake.

Candidate centred learning and teaching approach are encouraged with candidates actively participating in practical activities after lecturer demonstration of key construction practices and principles.



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

**Unit title:** Bricklaying: Set Out and Build Brickwork Masonry to Rake (SCQF level 6)

The use of effective questioning techniques to confirm understanding of salient learning objectives should be central to learning and teaching approaches used in classrooms or workshops.

Candidates should be encouraged to learn at their own pace with e-learning opportunities available to suit their preferred learning style. The use of e-learning as a teaching tool should be adopted by lecturers wherever possible to enable candidates to develop at their own pace using preferred learning styles.

Learning and Teaching approaches should ensure that candidates are acquiring the underpinning knowledge required for the Unit in tandem with undertaking practical workshop activities.

### **Guidance on approaches to assessment for this Unit**

Detailed assessment material for this Unit will be found in the Bricklaying 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 Bricklaying 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 and components related to setting out and building masonry to rake will be assessed through a question paper.

Candidates should be given as much practise as possible in the appropriate bricklaying techniques for building masonry to rake, prior to being set the assessment. Evidence will be gathered for Outcome 2 and Outcome 3 through observation of work processes and assessment of the completed workpieces to ensure that the candidates have met the given standards and tolerances during the practical assessment. An assessor observation checklist must be used to record this evidence.

### **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)

**Unit title:** Bricklaying: Set Out and Build Brickwork Masonry to Rake (SCQF level 6)

### Opportunities for developing Core Skills

Components of the Core Skill of *Problem Solving* at SCQF level 4, 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 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 assessors will enhance the evaluation of productive work practices.

There are opportunities to develop the Core Skill of *Working with Others* at SCQF level 4, particularly in Outcomes 2, and 3, as these practical assessments should be carried out in pairs or teams. Candidates can agree responsibilities and provide support and information to each other during the practical group activities.

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, manufacturer's instructions and specifications, interpretation of drawings.

Numeracy at SCQF level 4 could be enhanced through the interpretation of information from 2-dimensional working drawings and the practical use of templates and calculation, geometry and measuring scales required for teaching and learning assessments for Outcome 2 and Outcome 3. There are also numeracy questions to be answered in relation to the calculation of materials required to set out and build gable and ramped masonry walls.

There will be opportunities for candidates to develop the Core Skills of *Communications* at SCQF level 4 through the knowledge part of the assessment for Outcomes 1. As candidates complete practical tasks in Outcomes 2 and 3, they should be expected to communicate with others using the correct terminology, tone and style suited to the workplace while interpreting drawings. There may be opportunities to develop ICT skills level 3 where centres opt to use e-assessment, e-portfolios and/or online learning materials.

### 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
02	Amended to incorporate insulation to full height.	19/12/2016

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