



National Unit specification: general information

Unit title: Bricklaying: Set Out and Build Brickwork Masonry Sub-Structures (SCQF level 6)

Unit code: H090 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 candidate's skills and knowledge in substructure walling. This Unit is designed to provide candidates with competence in the use of tools and equipment to set out and build substructure walling and the ability to apply these skills in the workplace.

Outcomes

- 1 Demonstrate knowledge and understanding of terminology and construction practices used in substructure walling and ground floor construction.
- 2 Demonstrate knowledge and understanding of terminology, construction practices and procedures used in setting out masonry substructures.
- 3 Set out accurately to assist substructure masonry construction.
- 4 Build substructure walling.

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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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

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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

Demonstrate knowledge and understanding of terminology and construction practices used in substructure walling.

Performance Criteria

- (a) Identify and select terminology related to substructure walling.
- (b) Identify and select construction practices and principles relating to substructure walling.
- (c) Identify and select construction practices and principles relating to suspended and solid ground floors.

Outcome 2

Demonstrate knowledge and understanding of terminology, construction practices and procedures used in setting out masonry substructures.

Performance Criteria

- (a) Measure and set up ranging lines in accordance with the given specification.
- (b) Set up and use corner profiles in accordance with the given specification.
- (c) Set up datum peg in accordance with the given specification.
- (d) Transfer datum levels in accordance with the given specification.
- (e) Comply with current Health and Safety and sustainability requirements during all work methods and activities.

Outcome 3

Set out accurately to assist substructure masonry construction.

Performance Criteria

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

National Unit specification: statement of standards

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Outcome 4

Build substructure walling.

Performance Criteria

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

National Unit specification: statement of standards (cont)

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Evidence Requirements for this Unit

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

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

Written and/or oral recorded evidence is required to demonstrate that the candidate has achieved Outcomes 1 and 2 to the standard specified in the Performance Criteria. Candidates will be required to demonstrate their knowledge of terminology and practices by successful completion of a question paper relating to the setting out and building of substructure walling. This assessment will be conducted under controlled, closed-book supervised conditions.

Product and performance evidence is required to demonstrate that the candidate has achieved Outcomes 3 and 4 to the standards specified in the Performance Criteria. Using profiles and datum candidates will build to the predetermined position and height. On completion the substructure walling will include the correct positioning of wall ties, damp proof courses, stepped foundations, ventilators and provision for services. The completed substructure wall should be about 3.5 metres. Candidates will work in teams of two or four in opposite corners to each other. Assessment of these Outcomes will be evidenced through observation of work processes and assessment of the completed work. 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 3 Set out accurately to assist substructure masonry construction.

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Establish the front building line from given dimensions	Correct to within 5mm
Set up gable line	Square at 90° to front building line
Set up corner profiles	Secured, positioned correctly and leaving working space
Mark positions of front and gable wall on profiles using nails	Accurate to within 2mm
Fix ranging lines to nails on corner profiles	Tight and securely hitched
Setting up and using datum pegs	
Fix datum peg	Secured and positioned suitably for transferring levels to corner brickwork

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Item	Measurement of standard
Transfer a height from a temporary bench mark to the datum peg (assume this to be the finished floor level). Use a levelling instrument or laser level for this.	Correct to within 2mm
Mark the finished height on datum peg (allowing for thickness of floorboards + joists + wallplate + mortar bed)	Correct to within 2mm
Work out the courses of brick required from concrete to wallplate/DPC level	Correct
Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
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 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

Outcome 4 Build substructure walling

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Build to correct finished height	± 5mm
Set out and bed first course from ranging lines.	Accurate to within 5mm
Overall length	± 8mm
Gauge	± 5mm
Level	± 5mm
Plumb	± 5mm
Joint thickness	± 5mm
Faceplane	± 6mm
Cavity width	± 3mm
Honeycomb wall	Positioned as specified
DPC	Positioned as specified
Wall ties	Positioned to building regulations
Provision for services	Positioned as specified
Perpend	No deviation exceeding 5mm
Air brick and DPC tray	Positioned as specified, clean

National Unit specification: statement of standards (cont)

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Outcome 4 Build substructure walling (continued)

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
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 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

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 40 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 knowledge and skills relating to setting out techniques and construction practices associated with substructure walling with specific knowledge in damp proof courses, stepped foundations, ventilators and provision for services throughout brickwork.

This Unit would be offered to candidates working towards a Modern Apprenticeship in Bricklaying and will develop the candidate's skills in setting out and building substructure walling. 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 substructures, damp proof courses, stepped foundations, ventilators, provision for services throughout brickwork and suspended and solid ground floor details. 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 comply 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

The candidate is given the opportunity to further develop their skills in bricklaying by learning about substructure walling and its principles of construction. The checking of levels should be encouraged as work proceeds. The terms used for substructure wall construction should be integrated to the practical tasks undertaken, and the basic principles of masonry substructures should be explained as the substructure is being built. This teaching approach should ensure the candidate is acquiring the underpinning knowledge required for the Unit.

National Unit specification: support notes (cont)

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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 and construction practices of bricklaying will be assessed through a question paper.

Candidates should be given as much practise as possible in setting out and bricklaying techniques, prior to being set the assessment. Evidence will be gathered for Outcomes 3 and 4 through observation that the candidates have met the given standards and tolerances during the practical assessment. An assessor observation checklist should 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)*.

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 choice of tools, appropriate materials, building science, safety issues, safety equipment and sustainability. 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 3, and 4, 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.

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
02	Amended to incorporate ground floor construction.	19/12/2016

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