



## National Unit Specification: general information

**UNIT**        Bricklaying: Piers (SCQF level 6)

**CODE**        F6MC 12

### SUMMARY

This Unit is suitable for candidates working towards a Modern Apprenticeship in Bricklaying and will introduce the candidate to the principles of constructing isolated and attached piers. The Unit is designed to provide candidates with competence in the use of tools and equipment to set out and build piers and the ability to apply these skills in the workplace. It is also designed to enable candidates to develop their skills and understanding and use bricklaying terminology, techniques and practices to build piers.

### OUTCOMES

- 1    Demonstrate knowledge and understanding of suitable materials, bonding arrangements, construction practices and details associated with piers.
- 2    Set out and build half brick wall with attached piers.
- 3    Set out and build an isolated pier in stretcher and English bonds.
- 4    Set out and build a one brick wall with an attached pier.

### RECOMMENDED ENTRY

Whilst entry 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.

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#### Administrative Information

**Superclass:**        TG

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## **National Unit Specification: general information (cont)**

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### **CREDIT VALUE**

1 credits at Higher (6 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**

There is no automatic certification of Core Skills or Core Skill components in this Unit. Opportunities for developing aspects of the following Core Skills are highlighted in Support Notes of this Unit.

- ◆ Problem Solving at SCQF level 4
- ◆ Working with Others at SCQF level 4
- ◆ Numeracy at SCQF level 4
- ◆ Communications at SCQF level 4
- ◆ ICT at SCQF level 3

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

### **UNIT        Bricklaying: Piers (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 suitable materials, bonding arrangements, construction practices and details associated with piers.

##### **Performance Criteria**

- (a) Identify and select the use of a range of bricks and mortar mixes suitable for building piers.
- (b) Identify and select the sequence to dry bond the first course of bricks.
- (c) Identify and select the construction practices used in setting out and building piers.
- (d) Identify and select the correct construction details for isolated and attached piers.

#### **OUTCOME 2**

Set out and build a half brick wall with attached piers.

##### **Performance Criteria**

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

#### **OUTCOME 3**

Set out and build an isolated pier in stretcher and English bonds.

##### **Performance Criteria**

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

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

### UNIT Bricklaying: Piers (SCQF level 6)

#### OUTCOME 4

Set out and build a one brick wall with an attached pier.

#### Performance Criteria

- (a) Set out wall and pier in accordance with the given specification.
- (b) Build wall and pier in accordance with the given specification.
- (c) 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 Bricklaying 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 oral evidence is required to demonstrate that the candidate has achieved Outcome 1 to the standards specified in the Performance Criteria. The evidence for this Outcome will be in the form of a question paper and will be assessed under supervised, closed-book, controlled conditions.

Product and performance evidence supported by an assessor observation checklist should be used to show that the candidate has achieved Outcomes 2, 3 and 4 to the standard specified in the Performance Criteria. Candidates must meet the given standards and tolerances 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

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Setting out	± 8 mm
Gauge	± 5 mm
Level	± 5 mm
Plumb	± 5 mm
Joint thickness	± 5 mm
Faceplane	± 5 mm
Perpends	± 5 mm
Internal joint finish	Full and all arrises as appropriate
External joint racked out	± 5 mm
Bonding	Correct lap maintained
Typing in	Correct lap maintained
Facework	Left clean, minimal smudging, no visual defects

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

### UNIT Bricklaying: Piers (SCQF level 6)

#### Outcome 3

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Setting out	± 8 mm
Square bottom course	± 3 mm
English bond	Maintained
Gauge	± 5 mm
Level	± 5 mm
Plumb	± 5 mm
Pad stone	± 3 mm
Faceplane	± 5 mm
Joint thickness	± 3 mm
Perpend	± 3 mm
Facework	Left clean, minimal smudging, no visual defects
Recess jointly uniform depth	± 3 mm
Beam level	± 5 mm

#### Outcome 4

Summary of standards (working towards industrial tolerances)	
Item	Measurement of standard
Setting out	± 8 mm
Gauge	± 5 mm
Plumb	± 5 mm
Level (overall length)	± 5 mm
Level (overall width)	± 4 mm
Pier square to wall	± 5 mm
English bond	Maintained
Joint thickness	± 4 mm
Perpend	± 4 mm
Faceplane	± 4 mm
Facework	Left clean, minimal smudging, no visual defects
Weather jointing	No gaps
Rear face	No open joints, minimal smudging

Summary of standards (working towards industrial tolerances)	
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 safely 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      Bricklaying: Piers (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 40 hours.

#### **GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT**

The content and context of this Unit is aimed at candidates who are interested in pursuing a career in the craft of bricklaying. Candidates will be required to gain an understanding of the correct terminology and sequences of constructing piers and will gain practical experience of building piers to given tolerances with the use of 3-dimensional drawings. The sound constructional principles of correct bonding and use of pad stones are emphasised along with firm guidance on safe working practices be given at all times. It is imperative that there is firm guidance on the continued development of safe working practices at this stage of the award.

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

This Unit 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: One Brick Walling* (SCQF level 6), *Bricklaying: Circular Walls* (SCQF level 6), *Bricklaying: Ramp 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**

The candidate is given the opportunity to further develop the skills of bonding and tying in techniques used in the bricklaying craft. The use of a steel square should be encouraged while candidate sets out isolated and attached piers. This teaching approach should ensure the candidate is acquiring the underpinning knowledge required for the Unit.

The critical importance of this Unit is the correct positioning, handling and levelling of the pad stone on top of the pier, must be constantly emphasised during the practical work.

## National Unit Specification: support notes (cont)

### UNIT      Bricklaying: Piers (SCQF level 6)

Opportunities should be taken throughout delivery of this Unit to meet the requirements if to generic Units of the Training and Assessment Programme including:

- ◆ *Conform to General Workplace Safety*
- ◆ *Confirm Work Activities and Resources for the Work*
- ◆ *Develop and Maintain Good Working Relationships*
- ◆ *Confirm the Occupational Method of Work*
- ◆ *Conform to Efficient Working Practices*
- ◆ *Move and Handle Resources*

### OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

Components of the Core Skills 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 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 to develop the Core Skill of *Working with Others* at SCQF level 4, particularly in Outcome 2 as this practical assessment may be carried out in pairs as part of teaching and learning. Candidates can agree responsibilities and provide support and information to each other during the assessments. After assessments, they should be encouraged to consider how effectively they support each other.

Opportunities could also arise for candidates to develop the Core Skills of *Information and Communication Technology* at SCQF level 3 by researching good current examples of decorative isolated and attached piers along with Health and Safety legislation affecting their area of work.

*Numeracy* at SCQF level 4 could be enhanced through the interpretation of information from 3-dimensional working drawings and the practical use of calculations required for teaching and learning assessments throughout this Unit.

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 Outcome 1. As candidates complete practical tasks in Outcomes 2, 3 and 4, they should be expected to communicate with others using the correct terminology, tone and style suited to the workplace.

### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Detailed assessment material for this Unit will be found in section four of 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 candidate's knowledge and understanding of terminology related to building piers and the sequence of building both isolated and attached piers will be assessed through a question paper.

## National Unit Specification: support notes (cont)

### UNIT      Bricklaying: Piers (SCQF level 6)

An assessor observation checklist should be used to record evidence of the candidate's ability to construct isolated and attached piers in Brickwork. The candidate will be provided with all of the tools, material and equipment to complete the practical tasks as well as drawings and specifications for the walls to be built.

The walls to be built will be

- ◆ a half brick wall with attached piers (minimum height ten courses, minimum length sixteen bricks)
- ◆ an isolated pier in Stretcher and English Bonds incorporating pad stone (minimum height twelve courses, minimum dimension two bricks square)
- ◆ a one brick thick wall with attached pier (minimum height thirteen courses, minimum length five bricks, dimension of pier 1x2 bricks)

It is recommended that candidates work in pairs to carry out Outcomes 2 and individually for Outcome 3 and 4.

Assessment of this Unit should be completed over a period of time and evidence should be gathered at appropriate intervals.

#### 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 communications 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)*.

#### CANDIDATES WITH DISABILITIES AND/OR ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs (www.sqa.org.uk)*.