



## National Unit Specification: general information

**UNIT** Roofing: Plain Tiling Vertical Surfaces (SCQF level 6)

**CODE** F7A3 12

### SUMMARY

This Unit is suitable for candidates working towards a Modern Apprenticeship in Roofing Occupations and is designed to provide candidates with competence in the use of tools and equipment to prepare, set out and cover vertical surfaces with plain tiles and the ability to apply these skills in the workplace. It is also designed to enable candidates to develop their knowledge and understanding and use roof tiling terminology and traditional techniques and practices when laying and fixing plain tiles to vertical surfaces.

### OUTCOMES

- 1 Demonstrate knowledge and understanding of roofing terminology, components, techniques and sequence of operations for the application of plain tiles to vertical surfaces.
- 2 Prepare and set out a vertical roof surface prior to plain tiling.
- 3 Position and fix plain tiles to a vertical surface.
- 4 Form and fix lead soakers and apron flashings for plain tiling details to vertical surface.

### RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates undertaking the Professional Development Award in Roof Slating, Tiling and Cement Work 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 credit at SCQF level 6 (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**

While 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
- ◆ *Numeracy* at SCQF level 4
- ◆ *Information and Communication Technology* at SCQF level 3
- ◆ *Working with Others* at SCQF level 4
- ◆ *Communication* at SCQF level 4

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

### **UNIT      Roofing: Plain Tiling Vertical Surfaces (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 roofing terminology, components, techniques and sequence of operations for the application of plain tiles to vertical surfaces.

##### **Performance Criteria**

- (a) Define roofing terminology related to plain tiling a vertical surface.
- (b) Identify and select roofing components used to tile a vertical surface
- (c) Describe techniques and sequence of operations required for covering a vertical surface.
- (d) State basic health and safety requirements related to roofing.

#### **OUTCOME 2**

Prepare and set out a vertical roof surface prior to plain tiling.

##### **Performance Criteria**

- (a) Prepare a vertical surface prior to plain tiling.
- (b) Set out vertical surface.
- (c) Comply with current health and safety and building regulations throughout activity.

#### **OUTCOME 3**

Position and fix plain tiles to a vertical surface.

##### **Performance Criteria**

- (a) Position and fix plain tiles to a vertical surface.
- (b) Position and fix internal and external angle tiles.
- (c) Position and fix plain tiles and fittings to a window opening.
- (d) Comply with current health and safety and building regulations throughout activity.

#### **OUTCOME 4**

Form and fix lead soakers and apron flashings for plain tiling details to vertical surface.

##### **Performance Criteria**

- (a) Calculate and form a soaker template.
- (b) Cut and form soakers from the template.
- (c) Position and fix soakers and apron flashing to a window detail.

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

### UNIT Roofing: Plain Tiling Vertical Surfaces (SCQF level 6)

#### EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required to demonstrate that the candidates have achieved this Unit to the standard specified in all the Outcomes and Performance Criteria. All working practices must be in line with relevant and current Health and Safety legislation and regulations.

Written and/or oral evidence is required for Outcome 1 which demonstrates that the candidate can define and describe roofing terminology, components, techniques and sequence of operations associated with plain tiling to vertical surface. The evidence for this Outcome will take the form of a question paper and be obtained under closed-book supervised conditions.

Performance and product evidence for Outcomes 2, 3 and 4, supplemented with an assessor observation checklist, should be used to confirm the candidate has individually met the standards specified in the Performance Criteria and summary of standards. Candidates will be observed to show that they can achieve the following through the delivery of the Unit:

- ◆ Measure area accurately
- ◆ Setting out and fix eave timber fillet
- ◆ Setting out and fix underlay felt
- ◆ Setting out and fix timber counter batten
- ◆ Setting out and fix a plain tile roof covering and associated fittings
- ◆ Form templates, lead soakers and apron flashings
- ◆ Set out and fix lead soakers and apron flashings
- ◆ Minimise wastage of materials to improve sustainability and efficiency
- ◆ Behave in a safe manner at all times

Competence will be based on candidates completing practical activities in accordance with the stated tolerances. Candidates must achieve the following standards:

#### Summary of Standards for plain tile vertical surfaces with 90° internal and external angles and a window opening, (working towards industrial tolerances)

##### Setting out and preparation

- |                         |  |
|-------------------------|--|
| ◆ Check boarding        | Removes protruding nails                     |
| ◆ Felt vertical surface | Overhang of felt, 50 mm ±5 mm                |
| ◆ Horizontal overlap    | 75 mm ±5 mm                                  |
| ◆ Vertical overlap      | One stud min.450 mm or 150 mm                |
| ◆ Felt internal angle   | 150 mm return                                |
| ◆ Felt external angle   | 150 mm return                                |
| ◆ Fix felt              | Nailed in correct position without punctures |

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

### UNIT Roofing: Plain Tiling Vertical Surfaces (SCQF level 6)

#### Battening

- ◆ Fix eave batten 50 mm  $\pm$ 5 mm
- ◆ Fix top batten Positioned to give correct cover from lead flashing
- ◆ Calculate batten States number of courses correctly
- ◆ Calculate batten gauge Correct gauge — formula
- ◆ Batten at struck lines Straight  $\pm$ 3 mm
- ◆ Fix battens Fixed without splits
- ◆ Fix batten to internal Joints staggered and external angles

#### Tiling Plain, vertical surface to include internal and external angle tiles and opening

- ◆ Position internal and external angle tiles Fixed to provide broken bond
- ◆ Nail tiles All tiles nailed twice
- ◆ Cut tiles Free from ragged edges
- ◆ Cut tiles Not less than half full width
- ◆ Fixes lead apron flashing Positioned to provide correct cover
- ◆ Forms lead soakers Soakers cut to correct length and width
- ◆ Position and fix tiles to opening Correctly tiled to provide waterproof cover
- ◆ Cleanliness of roof Free from mortar stains

#### Health and safety

- ◆ Working area Clean at all times
- ◆ Health and safety Complies at all times
- ◆ Risk assessment Safety boots worn at all times
- ◆ High visibility vest Worn at all times
- ◆ Hard hat Worn at all times
- ◆ Method statement Working area clean at all times
- ◆ Method statement Materials stacked correctly at all times
- ◆ Method statement Tools cleaned and stored safely at end of working day

These Evidence Requirements will be met by the completion of the Roof Slating, Tiling and Cement Work Training and Assessment Programme (TAP).

## National Unit Specification: support notes

### UNIT      Roofing: Plain Tiling Vertical Surfaces (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

This Unit has been developed as a mandatory Unit in the Professional Development Award (PDA) in Roof Slating, Tiling and Cement Work at SCQF level 6.

This Unit would 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 site, workshop, or similar environment. It should be delivered as part of a structured programme of training and orientated to the context of the candidates work and area of responsibility.

The successful completion of this Unit will provide candidates with the required underpinning knowledge and skills relating terminology, components, component function, legislation and material estimation in relation to marking out, positioning and fixing of plain tiles to vertical surfaces including fitting 90° internal and external angle tiles and components to a window opening.

The context of this Unit allows for a holistic integrated approach with other Unit in the PDA, therefore there are opportunities to integrate this Unit with aspects of *Roofing: Plain Tiling Gable to Gable* at SCQF level 6 and *Roofing: Plain Tiling Hips, Valleys and Curved Eaves* at SCQF level 6.

Health and Safety and Sustainability are integral and key to the Construction Industry and so 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 legislation affecting the conservation of the environment and its relevance to this trade and to the construction industry in general. Attention should also be drawn to the dangers of not implementing this legislation.

#### GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

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.

The candidate should be given the opportunity to further develop their skills through visual aids, electronic presentations, DVDs, e-learning, reference books, classroom exercises and group discussions.

Candidates should be encouraged to consider basic risk assessment **prior** to any practical activities taking place.

## National Unit Specification: support notes (cont)

### UNIT Roofing: Plain Tiling Vertical Surfaces (SCQF level 6)

#### Outcome 1

This Outcome should introduce the candidate into the terminology, components, techniques and sequence of operations of plain tiling to vertical surfaces. Terminology and components could include those indicated below:

Terminology: Underlay, breather membrane, bonding, tile camber, flashings and soakers.

Components: Plain tile, eave tile, topper tile, tile-and-a-half tile, 90° internal angle tiles, 90° external angle tiles, soakers, apron flashing.

#### Outcomes 2, 3 and 4

It is recommended that candidates work in pairs for these Outcomes. Candidates should be encouraged in self and peer evaluation of work and achievement of standards.

The candidate should be provided with a 3 dimensional working drawing and specification outlining the content and Performance Criteria for the practical activities attempted.

Candidates should be made fully aware of current regulations and legislation in relation the roofing activities contained within this Unit.

It would be beneficial for lecturers to reinforce the appropriate disposal and re-use of roofing materials for sustainability considerations.

Candidates should be encouraged to calculate areas and quantities of roofing materials. This could take place in a classroom or a workshop environment. Candidates could take the opportunity to use spreadsheets to compile and record information related to material estimating.

Lecturers should provide candidates with constructive feedback in relation to performance and the standard achieved. Areas for improvement should be clearly identified.

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

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

## National Unit Specification: support notes (cont)

### UNIT        Roofing: Plain Tiling Vertical Surfaces (SCQF level 6)

#### OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

There are opportunities to develop aspects of the Core Skill of *Problem Solving* at SCQF level 4. 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, safety issues, safety equipment and sustainability. Individual discussions with assessors and the use of role play will enhance the evaluation of efficient working practices.

*Numeracy* skills at SCQF level 4 could be developed through roofing calculations for area and material estimating.

Opportunities also arise for candidates to develop the Core Skill of *Information and Communication Technology* at SCQF level 3 through researching roofing terminology and techniques on the internet, spreadsheets for materials information, e-learning and e-assessment.

There are opportunities for candidates to develop the Core Skill of *Working with Others* at SCQF level 4 through working in pairs for Outcomes 2, 3 and 4. Candidates can agree responsibilities and provide support and information to each other during the practical group activities.

Candidates will have the opportunity to develop *Communication* skills at SCQF level 4 throughout practical tasks, as 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

Section 2 of the Roof Slating, Tiling and Cement Work Training and Assessment Programme (TAP) provides detailed assessment material for this Unit. It is 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 through prior verification. It is expected that candidates will be given as much practice as possible, prior to being set assessment tasks.

For Outcome 1 a suitable method of assessing the candidate's knowledge and understanding of roofing terminology and sequence of operations for plain tiling vertical surfaces would be through a question paper incorporating multiple choice questions.

For Outcomes 2, 3 and 4 the candidate's ability to set out and plain tile a vertical surface will be assessed through practical activities. An assessor observation checklist can be used to ensure and record that the candidates have met the given standards and tolerances during the practical activity.



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

### **UNIT        Roofing: Plain Tiling Vertical Surfaces (SCQF level 6)**

#### **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](http://www.sqa.org.uk/assessmentarrangements)