



Higher National Unit specification

General information for centres

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

Unit code: F8N1 34

Unit purpose: This Unit is designed to enable candidates to develop a knowledge, understanding and skills of tiling to pitched, vertical and circular roofs. The Unit begins with the preliminary stages of advanced plain tiling with a focus on a laced valley and decorative vertical plain tiling and circular work.

On completion of the Unit you will be able to:

- 1 Explain theoretical details associated with plain tiles to a laced valley.
- 2 Explain theoretical details associated with ornamental plain tiling and circular work.
- 3 Produce a plain tile finish to a laced valley, vertical surface and circular work.
- 4 Specify the methods used for maintaining Health and Safety requirements for roof work.

Credit points and level: 2 HN credit at SCQF level 7: (16 SCQF credit points at SCQF level 7*)

**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.*

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the centre. It would be beneficial if candidates have successfully completed the Professional Development Award (PDA) in Roof Slating, Tiling and Cement Work at SCQF level 6 (G9GG 46) or have the equivalent level of industrial experience and prior learning.

Core Skills: There are opportunities to develop the Core Skills of *Problem Solving, Numeracy, Working with Others, Communication* at SCQF level 5 and *Information and Communication Technology* at SCQF level 4 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes. This Unit was developed as part of the Professional Development Award in Roof Slating and Tiling at SCQF level 7 and is aimed at candidates following a career in Roofing and receiving complementary industrial experience.

General information for centres (cont)

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

Assessment: It is possible to assess candidates either on an individual Outcome basis or combination of Outcomes. Evidence should be shown by the candidate that there is sufficient knowledge of how plain tiles are used as a decorative feature and used to prevent the ingress of water at abutment and valley junctions. The candidate must also provide evidence of how vertical surfaces are completed at structural junctions incorporating a Winchester cut detail including circular work. The candidates should be able to develop a knowledge and understanding of plain tiling systems used in the industry including Health and Safety requirements when installing plain tiles at heights.

The assessment instruments used should follow the general guidance offered by the Scottish Qualifications Authority (SQA) assessment model and an integrative approach to assessment is encouraged. Centres may use the instruments of assessment which they consider to be most appropriate but are advised to use the Roof Slating and Tiling Training and Assessment Programme (TAP) SCQF level 7 which has been developed centrally by SQA. Any other instruments of assessment used must be comparable to the TAP 7.

Accurate records should be made of the assessment instruments used showing how evidence is generated for each Outcome and given marking schemes, checklists and recorded candidate feedback. Records of candidates' achievements should be retained. These records must be made available for external verification.

Outcome 1, 2 and 4

The assessment paper(s) for these Outcomes should be composed of an appropriate balance of completing written report, short answer, restricted response and structured questions. Assessment should be conducted under supervised, controlled conditions. Written assessment should not exceed three hours in duration.

Outcome 3

The assessment(s) for this Outcome involves the installation of plain tiles to a pitched roof which must incorporate a laced valley and fix vertical tiles to details including a Winchester cut and circular work. Candidates should be fully aware of the health and safety issues that cover the working at heights regulations.

Higher National Unit specification: statement of standards

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Outcome 1

Explain theoretical details associated with plain tiles to a laced valley

Knowledge and/or Skills

- ◆ Roof condition
- ◆ Roof pitch
- ◆ Waterproofing membrane
- ◆ Timber battening
- ◆ Thermal insulation
- ◆ Roofing ventilation systems
- ◆ Roof covering
- ◆ Roof details

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can complete an assignment on the use and application of plain tiles to roof details incorporating plain tiles to laced valleys. All information and recommendations in the assignment must be in accordance with the current British Standards and Codes of Practice.

Evidence must be gathered under open-book controlled supervised conditions. Candidates may bring to the event any notes that have made personally. They must have access to the relevant manufacturer's guidelines and information for the produce to be used on the roof.

Assessment Guidelines

Evidence for the knowledge and skills in this Outcome should be composed of a proposed project for which a roof is to be covered in plain tiles with a laced valley detail.

In any assessment of this Outcome all Knowledge and/or Skills items should be included. Candidates must provide a satisfactory response to all items

The assessment for this Outcome might be combined with that for Outcomes 2 and 4 and conducted under open-book conditions not exceeding three hours.

Higher National Unit specification: statement of standards (cont)

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

Outcome 2

Explain theoretical details associated with ornamental plain tiling and circular work

Knowledge and/or Skills

- ◆ Vertical details
- ◆ Waterproofing membrane
- ◆ Timber battening
- ◆ Thermal insulation
- ◆ Vertical covering
- ◆ Vertical area requirement
- ◆ Circular area requirement

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ describe common types and uses of plain tiles and ornamental details
- ◆ state the benefits of using plain tiles in vertical work
- ◆ describe the basic requirements for the installation of plain tiles
- ◆ illustrate the details of fixing plain tiles to vertical surfaces
- ◆ describe common uses of plain tiles in circular work
- ◆ illustrate the details of fixing plain tiles to circular work

In any assessment of this Outcome all Knowledge and/or Skills items must be included. Candidates must provide a satisfactory response to all items.

Evidence must be generated through assessment undertaken in controlled, supervised conditions.

Assessment Guidelines

Questions used to elicit candidate's evidence should take the form of an appropriate balance of scale drawings, annotated sketches, short answer, restricted response and structured questions.

In any assessment of this Outcome all Knowledge and/or Skills items should be included. Candidates must provide a satisfactory response to all items.

The assessment for this Outcome might be combined with that for Outcomes 1 and 4 and conducted under open-book conditions.

Higher National Unit specification: statement of standards (cont)

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

Outcome 3

Produce a plain tile finish to a laced valley, vertical surface and circular work

Knowledge and/or Skills

- ◆ Roof coverings
- ◆ Area calculation
- ◆ Setting out
- ◆ Laced valleys
- ◆ Winchester detail
- ◆ Vertical tiling
- ◆ Circular work
- ◆ Weathering
- ◆ Current Health and Safety
- ◆ Sustainability considerations

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ correctly prepare a roof surface incorporating a laced valley
- ◆ correctly prepare a vertical surface incorporating a winchester detail
- ◆ correctly prepare a roof surface incorporating a circular detail
- ◆ check weathering and finish details
- ◆ check circular work for aesthetics and water tightness

Higher National Unit specification: statement of standards (cont)

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

Summary of Standards

Plan

- ◆ Interpret given information from manufactures instructions
- ◆ Confirm roof covering compatibility
- ◆ Calculation of required area for plain tiles to roof and vertical work
- ◆ Ensure Health and Safety controls are appropriate

Prepare

- ◆ Check installation and manufacturer's instructions
- ◆ Measure area for installation and fixings
- ◆ Ensure underlay and counter batten detail correct
- ◆ Check batten gauge
- ◆ Install laced valley preparation work
- ◆ Install battening and preparation for circular work
- ◆ Check equipment and tools and suitability

Install plain tiles to a laced valley and vertical surface and circular roof

- ◆ Correct setting out and positioning of laced valley to ensure water tightness
- ◆ Correct setting out and positioning of vertical tiles including left and right angle tiles
- ◆ Correct setting out to finish vertical detail with an Winchester cut
- ◆ Correct setting out to circular work

Check and ensure quality of work is in line with current British Standards and codes of practice.

All Knowledge and/or Skills items must be evidenced. An assessor observation checklist should be completed to ensure that the candidate has met the required specification and manufacturer guidelines and this observation checklist should be retained as evidence. Evidence must be gathered under controlled, supervised conditions.

Assessment Guidelines

The assessment of this Outcome is based on the preparation and installation of plain tiles to a laced valley, vertical surface and circular work in which the candidate must refer to the manufacturer's instructions.

Higher National Unit specification: statement of standards (cont)

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

Outcome 4

Specify the methods used for maintaining Health and Safety requirements for roof work

Knowledge and/or Skills

- ◆ Working at height
- ◆ Risk assessment
- ◆ Method statements
- ◆ Manual handling
- ◆ Current Health and Safety regulations

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ correctly adhere to current health and safety methods and activities in terms of working at height
- ◆ undertake a risk assessment
- ◆ explain requirements for a method statement
- ◆ correctly adhere to current health and safety methods and activities in terms of manual handling
- ◆ correctly adhere to current health and safety methods and activities in terms of controlling substances hazardous to health

In any assessment of this Outcome all Knowledge and/or Skills items should be included. Candidates must provide a satisfactory response to all items

Evidence must be gathered under open-book, supervised conditions

Assessment Guidelines

Questions used to elicit candidate's evidence should take the form of an appropriate balance of annotated sketches, short answer, restricted response, structured questions and completion of a Risk Assessment.

The assessment for this Outcome might be combined with that for Outcomes 1 and 2.

Administrative Information

Unit code:	F8N1 34
Unit title:	Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs
Superclass category:	TG
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History of changes:

Version	Description of change	Date

Source: SQA

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Higher National Unit specification: support notes

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

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 (PDA) in Roof Slating and Tiling at SCQF level 7.

This Unit is intended to equip candidates with all necessary underpinning knowledge and skills related to specialised plain tiling methods and techniques required for pitched, vertical and circular roofs.

At the time of writing the following applies, although centres must ensure the most up to date standards and legislation are adhered to:

- ◆ BS 5534: the British Standard Code of practice for slating and tiling
- ◆ BS 8000: Part 6: the British Standard Code of practice for workmanship on building sites.
- ◆ Working at Height Regulations 2005
- ◆ Manual Handling Operations Regulations 1992
- ◆ COSHH 2002
- ◆ Reference should also be made to the Control of Lead at Work (third edition) Control of Lead at Work Regulations 2002 Approved Code of Practice and Guidance (ISBN 0-7176-2565-6)

The following information may be helpful in relation to specific Outcomes:

Outcome 1: Explain theoretical details associated with plain tiles to a laced valley (Recommended 4 hours)

- ◆ Condition of supporting timbers in new and existing roof work
- ◆ Suitability of materials to pitched and vertical surfaces
- ◆ Roof pitch, covering lap gauge and covering
- ◆ Technical details to laced valley
- ◆ Underlay and battening
- ◆ Condition of roof covering
- ◆ Roof area requirements

Outcome 2: Explain theoretical details associated with ornamental plain tiling and circular work (Recommended 6 hours)

- ◆ Type of plain tiles and suitability for location
- ◆ Minimising waste for specific details
- ◆ Counter and tile batten details in line with specification
- ◆ Details of openings and decorative finish
- ◆ Maintaining head and side lap for water penetration and aesthetics

Higher National Unit specification: support notes (cont)

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

Outcome 3: Produce a plain tile finish to a laced valley, vertical surface and circular work (Recommended 60 hours)

- ◆ Source and interpret information for installation
- ◆ Inspect roof structure (defects in timber work, roof covering compatibility, roof size, pitch, orientation)
- ◆ Calculation of materials required
- ◆ Roof pitch, covering lap gauge and covering
- ◆ Technical details to laced valley and groundwork
- ◆ Underlay and battening
- ◆ Condition of roof covering
- ◆ Roof area requirements
- ◆ Details of laced valley vertical work and circular work
- ◆ Ventilation systems to be incorporated on pitched roof
- ◆ Cover/side and head flashing to be incorporated on vertical
- ◆ Double lap cover to be maintained around openings
- ◆ Weathering details
- ◆ Manufacturers details to be used throughout installations

Outcome 4: Specify the methods used for maintaining Health and Safety requirements for roof work (Recommended 10 hours)

- ◆ **Health and Safety requirements**
 - Current Work at Height Regulations
 - Requirements for existing places of work or means of access or egress
 - Guard-rails, toe-boards, barriers or similar collective means of protection.
 - Requirements for working platforms
 - Requirements for collective safeguards for arresting falls
 - Requirements for personal fall protection system
 - Requirements for ladders
 - Particulars to be included in a report of inspection
- ◆ **Risk Assessment**
 - What is a Risk Assessment?
 - Completion of a Risk Assessment: Task description, location, completion date, review date, persons affected individuals or groups, hazards/consequences, identifying existing control procedures, risk ranking
- ◆ **Method Statements**
 - What is a Method Statements?
 - Requirements of a Method Statements: Task description, preparation, installation, commissioning, testing and handover, information sources
- ◆ **Manual Handling**
 - avoiding hazards
 - assessing hazards
 - reducing the risk of injury

Higher National Unit specification: support notes (cont)

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

◆ Control of Substances Hazardous to Health (COSHH)

- What is covered?
- What are the main obligations?
- Define good control practices

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. Safe 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.

Emphasis should be placed on appropriate areas such as waste management and effective sourcing and use of materials.

Where feasible, centres should also incorporate modern methods of construction used in industry. Candidates should be made aware of current industry practice and emerging practice or technology which may become conventional in the future.

Guidance on the delivery and assessment of this Unit

As part of the Professional Development Award (PDA) in Roof Slating and Tiling at SCQF level 7, this Unit may be delivered in a sequence suitable to individual candidates and centres. When completing this Unit as part of the PDA it is recommended that, where possible, opportunity is taken to integrate aspects of Constructional Technical Communication Skills (DW4D 34). This Unit could also be delivered as a free standing Unit.

The content of this Unit builds on the knowledge and understanding of roofing skills gained in the Roof Slating, Tiling and Cement Work PDA at SCQF level 6. It is recommended that evidence for learning Outcomes is achieved through well-planned course work, assignments and projects. Assessment may be formative and summative and both may feature as part of the process. Although assessments must be focused on the individual achievement of each candidate, group work may contribute to the assessment. Integrative assignments and project work will help to link this Unit with other units.

The volume of evidence required for each assessment should take into account the overall number of assessments being contemplated within this Unit and the design of the overall teaching programme. In designing the assessment instrument(s), opportunities should be taken to generate appropriate evidence to contribute to the assessment of Core Skills.

If feasible, site visits or information about of traditional and modern construction would be beneficial. This approach could be used to enhance the candidate's experience and understanding of how their skills and knowledge might be applied in real industry situations.

Higher National Unit specification: support notes (cont)

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

Centres may use the instruments of assessment which they consider to be the most appropriate but are advised to use the Roof Slating and Tiling Training and Assessment Programme at SCQF level 7 (TAP 7) which has been developed centrally by SQA. Any other instruments of assessment used must be comparable to the TAP.

Details on approaches to assessment are given under Evidence Requirements and Assessment Guidelines under each Outcome in the Higher National Unit specification: statement of standards section. It is essential that these sections be read carefully before proceeding with assessment of candidates.

Opportunities for developing Core Skills

Problem Solving at SCQF level 5 could be developed for Outcomes 3 and 4 through analysing a range of factors in order to work efficiently and safely, such as the suitability and condition of the roof, choice of tools and equipment, 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 5 could be developed for Outcomes 2 and 3 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 4 for Outcome 1, 2 and 4 through researching traditional and heritage roofing terminology and techniques used 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 5 through working in pairs for Outcomes 3. 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 5 throughout practical tasks, as they should be expected to communicate with others using the correct terminology, tone and style suited to the workplace.

Higher National Unit specification: support notes (cont)

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

Core Skills Signposting

Core Skill	Outcome 1	Outcome 2	Outcome 3	Outcome 4
1 Communication				
Reading	SCQF 5	SCQF 5		
Writing	SCQF 5	SCQF 5		
Oral	SCQF 5	SCQF 5		
2 Numeracy				
Using Number		SCQF 5	SCQF 5	
Using Graphical Information		SCQF 5	SCQF 5	
3 IT				
Using Information Technology	SCQF 4	SCQF 4		SCQF 4
4 Problem Solving				
Critical Thinking			SCQF 5	SCQF 5
Planning and Organising			SCQF 5	SCQF 5
Reviewing and Evaluating			SCQF 5	SCQF 5
5 Working with Others			SCQF 5	

Open learning

Although this Unit could be delivered by distance learning, it would require a considerable degree of planning by the centre to ensure the sufficiency and authenticity of candidate evidence. Arrangements would have to be made to ensure that:

- ◆ candidates have access to a suitable workshop with suitable equipment and tools
- ◆ health and safety considerations are fully taken into account
- ◆ the practical activities are supervised by a responsible person and clearly recorded (using an assessment checklist for the assessor)
- ◆ the assessor is, at some point, able to question the candidate on that performance
- ◆ assessment is carried out under the stated conditions

For information on open learning arrangements, please refer to the SQA guide *Assessment and Quality Assurance of Open and Distance Learning* (www.sqa.org.uk)

Disabled candidates and/or those with additional support needs

The Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. 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

General information for candidates

Unit title: Roofing: Specialised Plain Tiling to Pitched, Vertical and Circular Roofs

This Unit has been designed to further your career in the construction industry by developing your competence and improving your knowledge of traditional and heritage roofing, with a particular focus on plain tiling a laced valley, ornamental and circular details. It has been written as part of the Professional Development Award (PDA) in Roof Slating and Tiling at SCQF level 7, and is for experienced crafts persons working in the construction industry as roofers.

The Unit will help develop your underpinning knowledge and skills related to roofing skills, plain tiling a laced valley, ornamental and circular details. You will also focus on Health and Safety considerations when working at height.

On completion of the Unit the candidate will be able to:

- 1 Explain theoretical details associated with plain tiles to a laced valley.
- 2 Explain theoretical details associated with ornamental plain tiling and circular work.
- 3 Produce a plain tile finish to a laced valley, vertical surface and circular work.
- 4 Specify the methods used for maintaining Health and Safety requirements for roof work.

You will be assessed on your knowledge and understanding through open-book, supervised assignments and projects when you will need to refer to textbooks, handouts, manufacturer data sheets and instruction manuals.

You will also be assessed on your practical ability to prepare and fix plain tiles to a laced valley, ornamental and circular details. Your assessor will observe what you do and how well you demonstrate roofing skills.

There are opportunities for you to develop the Core Skills of *Problem Solving, Numeracy, Working with Others, Communication* at SCQF level 5 and *Information and Communication Technology* at SCQF level 4 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

If you successfully complete this Unit and the full PDA at SCQF level 7, you will not only have advanced your craft skills, but will automatically receive some credit if you progress on to the HNC Construction.