



Higher National Unit specification

General information for centres

Unit title: Conservation Crafts: Roofing

Unit code: F4MV 35

Unit purpose: This Unit is designed to introduce candidates to the properties and nature of traditional roof coverings. It will provide an advanced understanding of the skills, techniques and expertise of the roofing craft. The Unit will allow candidates to experience practical activities in order to appreciate the nature of roofing activities.

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

- 1 Evaluate the use of slate and lead roof surface finishes.
- 2 Describe the methods of preparation for re-roofing with slates and tiles and the tools that could be used.
- 3 Evaluate methods of surface preparation for roof sheet finishes.
- 4 Plan and prepare natural slates for re-roofing and carry out re-roofing work.
- 5 Boss a section of sheet lead material in position.

Credit points and level: 1 HN credit at SCQF level 8: (8 SCQF credit points at SCQF level 8*)

**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: It would be beneficial if candidates had a basic knowledge and understanding of roofing or the construction industry.

Core Skills: There are opportunities to develop the Core Skills of *Communication, Numeracy, Information Technology* and *Problem Solving* all at SCQF level 5 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.

Assessment: Candidates could complete a report on a listed building or a building of historical significance the main contents of the report should deal with the identification and evaluation of roofing materials used on the building. This allows opportunity for Outcomes 1, 2, and 3 to be integrated in the same report. **Outcome 4** — candidates are given a practical activity to dress, size and graded second hand slates in preparation for fixing on to a roof. The tasks have been aligned to National Occupational Standards. **Outcome 5** — candidates are given a practical activity to prepare and lay sheet lead to form a welt joint using appropriate tools.

Higher National Unit specification: statement of standards

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

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Evaluate the use of slate and lead roof surface finishes

Knowledge and/or Skills

- ◆ Evaluate slate and lead roof surface finishes
- ◆ Evaluate the material characteristics
- ◆ Evaluate the relevance of building location
- ◆ Evaluate the function of slate and lead

Evidence Requirements

This Outcome could be assessed in conjunction with Outcomes 2 and 3 details of which are in Outcome 3.

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

- ◆ describe a minimum of three material characteristic for slate and for lead.
- ◆ explain why slate and lead are utilised in specific locations. A minimum of three locations should be considered.

Assessment Guidelines

This Outcome could be assessed in conjunction with Outcomes 2 and 3 details of which are in Outcome 3.

Higher National Unit specification: statement of standards (cont)

Unit title: Conservation Crafts: Roofing

Outcome 2

Evaluate the methods of preparation for re-roofing with slates and roofing tiles and tools that could be used

Knowledge and/or Skills

- ◆ Scaffolding construction skills and techniques
- ◆ Preparation methods
- ◆ Tools for the preparation of the roof and fixing of slates and roofing tiles

Evidence Requirements

This Outcome could be assessed in conjunction with Outcomes 1 and 3 details of which are in Outcome 3.

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

- ◆ evaluate scaffolding requirements for re-roofing work
- ◆ evaluate preparation methods for re-roofing with slates and roofing tiles
- ◆ evaluate tools required for the preparation of natural slate and fixing on to roof

Assessment Guidelines

This Outcome could be assessed in conjunction with Outcomes 1 and 3 details of which are in Outcome 3.

Higher National Unit specification: statement of standards (cont)

Unit title: Conservation Crafts: Roofing

Outcome 3

Evaluate methods of surface preparation for roof sheet finishes

Knowledge and/or Skills

- ◆ Substrates for roof sheet finishes
- ◆ Procedure for laying and fixing substrates
- ◆ Preparation method for replacing roof sheet finishes
- ◆ Underlay
- ◆ Tools for the preparation of the roof and fixing of the roof sheet finishes

Evidence Requirements

This Outcome could be assessed in conjunction with Outcomes 1 and 2 details of which are in Outcome 3.

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

- ◆ identify substrates and outline procedures for laying and fixing substrates
- ◆ outline the preparation method for replacing sheet metal finishes
- ◆ identify and explain their use of underlay and tools for fixing roof sheet finishes

Assessment Guidelines

This Outcome could be assessed in conjunction with Outcomes 1 and 2. Candidates must be given a brief from which they could prepare a report. The brief could be on a listed building or a building of historical significance. The main content of the report could deal with roofing materials used on the building specified in the brief.

Higher National Unit specification: statement of standards (cont)

Unit title: Conservation Crafts: Roofing

Outcome 4

Plan and prepare natural slates for re-roofing and carry out re-roofing work

Knowledge and/or Skills

- ◆ Dressing and fixing of slates techniques, applied in a simulated exercise
- ◆ Location on roof
- ◆ Sizing and grading techniques
- ◆ Underlay materials
- ◆ Tools for fixing natural slate
- ◆ Safe working practices for fixing natural slates for re-roofing

Evidence Requirements

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

- ◆ plan the sequence of tasks for a job specification
- ◆ select the tools and underlay materials for the job
- ◆ size, grade and dress natural slates
- ◆ carry out re-roofing work using safe working practices

A minimum of one square metre of a pitched roof must be re-roofed.

Assessment Guidelines

Candidates could be presented with a job specification for a re-roofing task of one square metre. Evidence Requirements could be produced by completing the re-roofing job to current good practice. A checklist could be utilised to provide evidence including safe working practices.

Higher National Unit specification: statement of standards (cont)

Unit title: Conservation Crafts: Roofing

Outcome 5

Boss a section of sheet lead material in position

Knowledge and/or Skills

- ◆ Laying and fixing techniques for a section of sheet lead metal and fixing to substrate
- ◆ Current practice as indicated by the Lead Association
- ◆ Bossing tools and techniques
- ◆ Safe working practices

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can: boss a section of lead sheet metal incorporating a welt joint and one clip.

- ◆ lay and fix lead sheet metal and underlay in accordance with current accepted lead association good building practice
- ◆ select and use two bossing tools for a given situation
- ◆ safe working practices

Assessment Guidelines

Candidates will be presented with a brief for a bossing task. Evidence Requirements could be produced by completing the bossing job. A checklist could be utilised to provide evidence including safe working practices.

Administrative Information

Unit code: F4MV 35
Unit title: Conservation Crafts: Roofing
Superclass category: TG
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Higher National Unit specification: support notes

Unit title: Conservation Crafts: Roofing

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 for the HND Architectural Conservation.

Throughout this Unit tutors should encourage a conservative approach of minimal intervention, repair and disturbance to the fabric and finishes of a historic building in line with the underlying principles and philosophy of architectural conservation. This means that no building or part of it should be repaired before such repair is strictly necessary. Consideration should be given to the presumption against restoration, if this is possible, sustaining sources of materials and workmanship, matching (or not) with age. This philosophy is covered in the Unit *Architectural Conservation: Principles*.

Explanation of the different types of roof surface finish available should be carried out with particular emphasis on those used in the conservation of historic buildings. Particular attention should be paid to hands-on experience of handling these materials and candidates should be able to, for example, recognise some slates from different quarries in different geographical regions. Natural slates from regional quarries should be shown to candidates: eg West Highland and NE Scotland. Welsh and imported slate from Spain and China should also be examined. Foreign slates, however, should not be recommended as first choice.

Artificial slates should be included to allow candidates an overview of these materials, however the arguments for and against the use of such materials in conservation work should be made very clear. Code 5 lead could be used to form a small welt joint with a suitable substrate.

Guidance on the delivery and assessment of this Unit

Candidates should be made aware of terminology and methodology of stripping slates, setting them aside, denailing sarking boards and brushing down.

In order to achieve this Unit, candidates are required to present sufficient evidence that they have met the minimum Evidence Requirements for each Outcome. 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.

Higher National Unit specification: support notes

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Opportunities for developing Core Skills

The following grid provides a general guide to opportunities for the development of Core Skills in this Unit. Opportunities for the development of Core Skills at the output level are more fully identified in the Core Skills Sign Posting Guide.

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

Open learning

As teaching and learning for Outcomes 4 and 5 involve practical tasks and specialist equipment and tools they are not suited to delivery by distance learning. These Outcomes require candidates to be observed and questioned by practitioners. The delivery and assessment of Outcomes 1, 2 and 3 could be facilitated by on-line and blended learning.

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).

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- 5 Boss a section of sheet lead material in position.

It is worth 1 HN credit at SCQF level 8: (8 SCQF credit points at SCQF level 8).

You will be given an explanation of the different types of roof surface finish available with particular emphasis on those used in the conservation of historic buildings. Particular attention will be paid to hands-on experience of handling these materials and you will be able to, for example, recognise some slates from different quarries in different geographical regions.

Natural slates from regional quarries should be shown to you: eg West Highland and NE Scotland. Welsh and imported slate from Spain and China should also be examined. Foreign slates, however, should not be recommended as first choice.

Artificial slates should be included to allow you an overview of these materials, however the arguments for and against the use of such materials in conservation work should be made very clear.

Guidance will be given to you as to how the junctions of a roof are finished with the various materials. The roof junctions to consider are ridges, hips, verges and valleys (lead lined and swept).

Outline the methods of preparation for new roof finishes or the replacement of roof finishes with emphasis on conservation and restoration of historic buildings.

You should pay attention to faults which occur in slate roofing giving rise to the need to re-roof.

Guidance shall be given to you on stripping an old roof, denailing sarking, replacing sarking boards and brushing down as necessary.

You should prepare natural slates for re-roofing.

Guidance shall be given on the different parts of a slate including: head, shoulder, bed, back, tail and chamfered edge.

You should lay and fix natural slates either under working conditions or in a simulated exercise in a workshop.

Assessment for Outcomes 4 and 5 could be by direct observation. Assessment of Outcomes 1, 2 and 3 could be conducted by candidates being presented with a brief from which they could prepare a report. The brief could be on a listed building or a building of historical significance.