

National Unit Specification: general information

UNIT Construction Crafts: Roof Tiling (Intermediate 1)

CODE DM7N 10

COURSE Construction Crafts (Intermediate 1)

SUMMARY

This Unit is suitable for candidates with no previous experience in or knowledge of roofing work. The Unit is based on practical workshop activities involving single lap roofing tiles. Candidates will be required to set out and prepare a section of roof from eaves to apex. They will then tile the roof in single lap roofing tiles. They will develop safe working practices and general skills that will enhance employability.

This Unit is an optional Unit in the Intermediate 1 Construction Craft Course but can also be taken as a free-standing Unit. Candidates who achieve this Unit should feel confident in progressing to further Units in roof tiling at Intermediate 1 or Intermediate 2. They should also be able to progress satisfactorily to Units based on other pitched roof coverings such as slating where competences gained in this Unit will be further developed and applied.

OUTCOMES

- 1 Select, use and maintain hand-tools and materials.
- 2 Prepare roof surface for tiling.
- 3 Lay single lap tiles to a pitched roof surface.

RECOMMENDED ENTRY

Entry to this Unit is at the discretion of the centre.

Administrative Information

Superclass: TG

Publication date: April 2007

Source: Scottish Qualifications Authority

Version: 02

© Scottish Qualifications Authority 2007

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this Unit Specification can be purchased from the Scottish Qualifications Authority. The cost for each Unit Specification is £2.50. (A handling charge of £1.95 will apply to all orders for priced items.)

National Unit Specification: general information (cont)

UNIT Construction Crafts: Roof Tiling (Intermediate 1)

CREDIT VALUE

0.5 Credit at Intermediate 1 (3 SCQF credit points at SCQF level 4*).

**SCQF 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 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 in this Unit.

Opportunities for developing aspects of Core Skills are highlighted in *Guidance on Learning and Teaching Approaches for this Unit*.

National Unit Specification: statement of standards

UNIT Construction Crafts: Roof Tiling (Intermediate 1)

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 the Scottish Qualifications Authority.

OUTCOME 1

Select, use and maintain hand-tools and materials.

Performance Criteria

- (a) The selection of tools and materials is appropriate for the work to be carried out.
- (b) Tools and materials are handled correctly.
- (c) Materials are positioned correctly in the work area in accordance with good practice.
- (d) Tools are used solely for the purpose which they are intended.
- (e) Tools and materials are cleaned and stored as appropriate after use.
- (f) Health and safety requirements are complied with during all activities.

OUTCOME 2

Prepare roof surface for tiling.

Performance Criteria

- (a) Underlay is fixed to the roof surface correctly and in accordance with good practice.
- (b) Counter battens are fixed correctly and to given centres.
- (c) Tile battens are fixed correctly and to given gauge and lap.
- (d) A quality check is carried out on the roof surface prior to tiling against the prescribed standards and tolerances.
- (e) Health and safety requirements are complied with during all activities.

OUTCOME 3

Lay single lap tiles to a pitched roof surface.

Performance Criteria

- (a) The eaves Course is fixed to the roof surface correctly and in accordance with good practice.
- (b) The main roof surface is tiled correctly and in accordance with good practice.
- (c) A quality check is carried out on the finished work against the prescribed standards and tolerances.
- (d) Health and safety requirements are complied with during all activities.

National Unit Specification: statement of standards (cont)

UNIT Construction Crafts: Roof Tiling (Intermediate 1)

EVIDENCE REQUIREMENTS FOR THIS UNIT

Performance evidence is required to show that all Outcomes and Performance Criteria have been achieved.

Performance evidence will be supported by an assessor checklist. This evidence will be generated from an integrated assignment consisting of practical activities carried out in supervised workshop conditions. The evidence may be gathered at different points throughout the Unit. The practical activities will cover:

- ◆ selecting the correct tools and materials for particular tasks, using the tools in a correct and safe manner, using them solely for the purpose for which they are designed, and cleaning and storing them correctly after use
- ◆ cutting and fixing underlay to a section of pitched roof, measuring out accurately and setting out and fixing battens and counter battens
- ◆ lay single lap tiles to a section of pitched roof from eaves to apex
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment:
 - underlay, counter battens and battens
 - roof tiler work
- ◆ candidates maintaining a clean and tidy workplace and adhering to health and safety requirements throughout all activities

The National Assessment Bank item (NAB) for this Unit provides an assessor checklist and details of the practical assignment which exemplify the national standard. Centres wishing to develop their own assessments should refer to the NAB to ensure a comparable standard.

National Unit Specification: support notes

UNIT Construction Crafts: Roof Tiling (Intermediate 1)

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 20 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

The content in this Unit covers practical roofing activities at an introductory level. The candidate is required to develop the ability to select and use tools correctly and safely. It is therefore important that the learning takes place in a supervised workshop/site environment. Basic safe working practices will be included in the content as it is important that candidates learn to adhere to these at all times.

During the process of practical work the candidate will become accustomed to the use of roofing terms in general and pitched roofing terms in particular. They will be able to demonstrate knowledge and understanding of these terms in everyday practice. The main content of the Unit will be learning the skills required in preparing a pitched roof for tiling (including underlay, battens and counter battens) and laying roofing tiles to the prepared slope. Candidates should be taught good working practices at each stage and should learn how to carry out a quality check on their own work on completion.

It is envisaged that many candidates will have little or no experience of working with the range of tools and materials associated with this Unit. Underpinning the practical skills is the need to ensure the candidate appreciates the reasons for carrying out the tasks in the manner directed. They will learn the reasons for using specific tools for specific materials. They will also learn the importance of good health and safety and personal protective equipment.

The practical tasks require the candidate to select tools, and to handle, position, and store tools and materials. In carrying this out candidates should learn the importance of being considerate to others and of working in a safe and systematic manner. The maintenance of a clean and tidy work area includes the positioning of tools and materials before, during and after use. Materials used are likely to include timber battens, rolls of underlay, roofing tiles and nails. Tools are likely to include, setting out tools (rule, tape measure, chalkline), claw hammer and saw.

In addition to the vocational content, candidates should be encouraged to focus on the general skills and attitudes that are valued by employers. These should be taught as an integral part of the Unit. Opportunities will arise in various practical contexts to discuss the value of, for example: time-keeping, working co-operatively, taking advice, maintaining a clean, tidy and organised workplace, planning and thorough preparation. The context for learning should include the requirement to be clean, presentable and appropriately dressed for the workshop, wearing personal protective equipment (PPE) including protective clothing when required.

Relevant aspects of current health and safety legislation and any systems of work relevant to the candidates' workshop/workplace should be explained and adhered to as part of the work of this Unit.

National Unit Specification: support notes (cont)

UNIT Construction Crafts: Roof Tiling (Intermediate 1)

Employability Skills

On completion of this Unit the candidate will have had opportunities to develop the following employability skills:

- ◆ timekeeping
- ◆ attendance
- ◆ following instructions
- ◆ taking advice and dealing with constructive feedback
- ◆ maintaining a tidy work area
- ◆ working co-operatively with others
- ◆ planning and preparation*
- ◆ checking quality of own work*
- ◆ positive attitude to learning
- ◆ review and self-evaluation
- ◆ awareness of health and safety issues*
- ◆ interpretation of graphic information

Achievement in a number of these employability skills (those marked with an asterisk) will be clearly identified as a result of the evidence generated through the assessment activities for this Unit. There are opportunities to develop the remaining skills.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Experiential learning is the main approach recommended for this Unit. This involves learning through practical experiences and activities. Candidates should experience simulated workplace conditions and should be encouraged to perform tasks and conduct themselves in a manner appropriate to the workplace.

Experiential learning also involves reflecting on experiences/activities, identifying strengths and areas for improvement. It is important to encourage candidates throughout the Unit to evaluate their own work and progress. They should be encouraged to seek advice and set themselves goals to build competence and confidence in undertaking tasks.

This Unit is designed to introduce the candidates to skills associated with introductory roofing, in particular single lap tiling. It includes planning, organising, setting out and completing introductory tasks in single lap tiling. The candidate may work as part of a team in order to complete the practice roofing activities. Effective participation with others forms an important aspect of this Unit.

Practical activities form the basis of the work of this Unit. A simulated roof structure of such a size as to allow realistic approaches to single lap roof tiling should be used. It is recommended that the candidates should be encouraged to work in pairs or small groups in order to simulate a 'real' roofing project. Centres should develop projects suitable to their particular situation, workshop premises and facilities. Health and safety must at all times be given the highest priority.

In this Unit there are many opportunities to build up an understanding of the workplace ethos and the behaviours and practice required of employees and employers. Checking standards of work against prescribed tolerances is a very useful skill and habit that candidates can develop during their work.

National Unit Specification: support notes (cont)

UNIT Construction Crafts: Roof Tiling (Intermediate 1)

Candidates may use a spare batten marked with the correct centres for tile battens. They may use a chalkline in conjunction with this device to ensure correct location of battens on the roofslope.

They may also learn how to use a retractable steel tape to check batten centres after this exercise. The construction industry is very keen on producing work that is ‘right first time’ and quality checks are an inherent part of the work in the industry. Candidates can be encouraged to approach their work with care and build in a checking process as part of good practice.

Responsible, safe behaviour in the workplace can be demonstrated and practised as part of the routine essential work for example: candidates will learn that a build up of timber off-cuts and loose tiles around the workspace could be a tripping hazard; they will learn how to use roofing tools and equipment in a safe manner and how to clean and maintain them; daily routines in the workplace will include maintaining a clean and tidy workspace.

Opportunities for developing aspects of Core Skills should be incorporated where they arise naturally in the teaching and learning process. In this Unit, candidates will make simple calculations in planning for and cutting counter battens and battens to correct lengths; they will also set out and fix counter battens and battens to required centres on the roofslope and check these various measurements prior to fixing of the tiles. These are good opportunities for developing aspects of Numeracy.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Candidates will read instructions for work activities, including the specifications of materials required for the practical activity; they will also take part in discussions with peers and tutors regarding work tasks, materials, use of tools and workshop protocol; and at all times, clear and courteous communication with their peers, supervisors and technicians will be needed on use of workspace, tools and health and safety issues. All of these activities present opportunities for developing aspects of Communication Skills.

Where this Unit is taken alongside the *Construction Crafts: Employability Skills* Unit, candidates will have additional opportunities to develop an awareness of the general employability skills and attitudes that are valued by employers. Integrated activities will involve the candidate assessing his/her own performance on time-keeping, attendance, taking instructions, seeking advice, planning and preparation, working co-operatively with others and general attitude. Candidates will also seek the views of tutors/supervisors and will identify areas for improvement and take responsibility for action plans. These activities will add value to the candidate’s experience and help to enhance employability.

Recognised working practices should be fully explained, demonstrated and practised. This includes correct manual handling techniques and posture when using tools on and off the roofslope.

Where it is possible to do so, underpinning knowledge should be integrated with practical activities in the workshop or project area.

Core Skills

There are opportunities to develop aspects of the Core Skills *Problem Solving* in this Unit. Candidates are required to check their own practical work against given standards and tolerances and are required to review and evaluate their work.

National Unit Specification: support notes (cont)

UNIT Construction Crafts: Roof Tiling (Intermediate 1)

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

It is expected that candidates will be given as much practice as possible in roofing techniques and in preparatory work, prior to being set the assessment tasks. The National Assessment Bank item for the Unit details the quality and quantity of roofing work to be produced for the Unit assessment. Tolerances required from the assessment task are significantly less stringent than those required by National Occupational Standards. Nevertheless, the use of tolerances in this way introduces candidates to the kind of quality regime they will experience if and when they pursue a career as a tradesperson in the construction industry.

An observation checklist should be used when gathering performance evidence. The NAB item for this Unit provides an observation checklist. Centres may develop their own instruments of assessment but these must be of a comparable standard to the NAB.

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).