



Higher National Unit specification

General information for centres

Unit title: Wall and Floor Tiling: Environmental Control Systems

Unit code: F8MP 34

Unit purpose: This Unit is designed to enable candidates to develop their knowledge, understanding and skills to specify, plan and install various movement, acoustic and water control systems used in a variety of specialist tiling contexts. This Unit is primarily designed to give candidates the practical skills and competence to carry out practical tasks in the installation of wall and floor tiling environmental control systems. On completion of this Unit candidates should be able to:

- 1 Demonstrate knowledge and understanding of element control systems used in wall and floor tiling.
- 2 Install movement control systems for wall and floor tiling.
- 3 Install acoustic reduction systems for wall and floor tiling.
- 4 Install water management and tanking systems for tiling installations.

Credit points and level: 1 HN credit at SCQF level 7 (8 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 Wall and Floor Tiling at SCQF level 6 (G9AP 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* and *Communication* at SCQF level 5 and *Information and Communication Technology* and *Numeracy* 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 Wall and Floor Tiling at SCQF level 7 and is aimed at candidates following a career in Wall and Floor Tiling and receiving complementary industrial experience.

General information for centres (cont)

Assessment: This Unit is assessed on the candidate's actual performance of installation of movement control, acoustic reduction and water management and tanking systems. The candidate will also have to show knowledge and understanding of the locations and uses of element control systems.

Performance evidence will be gathered through observation of work processes and assessment of the completed work. Assessment should be carried out under controlled, supervised conditions. In order to achieve this Unit, candidates are required to present sufficient evidence that they have met all the Knowledge and/or Skills elements for each Outcome. Details of these requirements are given 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, although it is recommended for the practical Outcomes for this Unit to approach assessment as separate assessment events due to the difficulty of integrating multiple element control systems into one assessment. Centres may use the instruments of assessment which they consider to be most appropriate but are advised to use the Wall and Floor 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.

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.

Outcome 1

Demonstrate knowledge and understanding of element control systems used in wall and floor tiling

Knowledge and/or Skills

- ◆ Types of element control systems
- ◆ Locations and conditions requiring control
- ◆ Application of control systems
- ◆ Fixing materials used in element control systems

Evidence Requirements

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

- ◆ describe **two** different circumstances requiring the control of movement and recommend solutions
- ◆ specify **two** sound reduction systems for tile installations
- ◆ specify **two** suitable water control systems for specific locations
- ◆ specify fixing materials for use with element control systems
- ◆ measure, source and cost for the installation of an element control system

Evidence must be gathered under controlled, supervised, open-book conditions. Candidates may bring to the event any notes that they have made personally. They may not bring textbooks, handouts or other material not prepared by them.

Assessment Guidelines

The assessment could be in the form of an exercise where the candidate will describe two circumstances under which the control of movement is required. Candidates should provide solutions to both these circumstances. Candidates should also specify two types of sound control and two types of water control systems for use in specified locations. Candidates are also required to specify fixing materials used with element control systems. It is recommended that the specification includes at least one fixing material used with acoustic and one material used with water control systems. An assessment exercise should also be undertaken where the candidate measures, sources and costs the installation of an element control system. The system specified can either be movement, water or sound control.

Higher National Unit specification: statement of standards (cont)

Unit title: Wall and Floor Tiling: Environmental Control Systems

Outcome 2

Install movement control systems for wall and floor tiling

Knowledge and/or Skills

- ◆ Surface preparation
- ◆ De-coupling membrane installation
- ◆ Movement control matting installation
- ◆ Perimeter movement accessories installation
- ◆ Current Health and Safety legislation
- ◆ Sustainability considerations

Evidence Requirements

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

- ◆ prepare surfaces to receive de-coupling membrane according to manufacturers' instructions
- ◆ measure, cut and lay de-coupling membrane according to manufacturers' instructions
- ◆ merge joints correctly according to manufacturers' instructions
- ◆ prepare surfaces to receive movement control matting according to manufacturers' instructions
- ◆ measure, cut and lay movement control matting according to manufacturers' instructions
- ◆ merge joints correctly according to manufacturers' instructions
- ◆ select, cut and fix perimeter movement accessories according to manufacturers' instructions
- ◆ comply with health and safety throughout all activities
- ◆ consider current sustainability issues related to the works

An assessor observation checklist must be completed to ensure that the candidate has met the required specification and tolerances and this observation checklist must be retained as evidence. Evidence must be gathered under controlled, supervised conditions with candidates working individually to carry out all activities.

Assessment Guidelines

The assessment of this Outcome should be assessed individually independently from all other Outcomes. Candidates should be provided with the specifications for the practical task and assessment should be carried out in a suitable workshop environment.

Higher National Unit specification: statement of standards (cont)

Unit title: Wall and Floor Tiling: Environmental Control Systems

Outcome 3

Install acoustic reduction systems for wall and floor tiling

Knowledge and/or Skills

- ◆ Surface preparation
- ◆ Acoustic matting, cutting and sizing
- ◆ Fitting acoustic matting
- ◆ Sealing joints
- ◆ Current Health and Safety legislation
- ◆ Sustainability considerations

Evidence Requirements

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

- ◆ prepare surfaces to receive acoustic matting
- ◆ measure and cut matting according to manufacturers' instructions
- ◆ fit matting according to manufacturers' instructions
- ◆ merge joints correctly according to manufacturers' instructions
- ◆ seal perimeters and wall junctions according to manufacturers' instructions
- ◆ apply seals around joints and openings according to manufacturers' instructions
- ◆ comply with health and safety throughout all activities
- ◆ consider current sustainability issues related to the works

An assessor observation checklist must be completed to ensure that the candidate has met the required specification and tolerances and this observation checklist must be retained as evidence. Evidence must be gathered under controlled, supervised conditions with candidates working individually to carry out all activities.

Assessment Guidelines

The assessment of this Outcome should be assessed individually apart from all other Outcomes. Candidates should be provided with the specifications for the practical task and assessment should be carried out in a suitable workshop environment.

Higher National Unit specification: statement of standards (cont)

Unit title: Wall and Floor Tiling: Environmental Control Systems

Outcome 4

Install water management and tanking systems for tiling installations

Knowledge and/or Skills

- ◆ Surface preparation
- ◆ Wet floor pre-formed installations
- ◆ Wet floor in-situ installations
- ◆ Capillary drainage systems
- ◆ Tanking compound application
- ◆ Jointing tapes and outlet mats application
- ◆ Current Health and Safety legislation

Evidence Requirements

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

- ◆ Prepare the surface and set out position of tray
- ◆ Install pre-formed tray to suit tile installation according to manufacturers' instructions
- ◆ Fit outlet according to manufacturers' instructions
- ◆ Plan and execute the construction of a capillary reaction drainage system for tile work
- ◆ Seal perimeters and wall junctions according to manufacturers' instructions
- ◆ Prepare background to receive tanking compound
- ◆ Apply tanking compound according to manufacturers' instructions
- ◆ Apply jointing tapes and outlet matt according to manufacturers' instructions
- ◆ Comply with Health and Safety throughout all activities

An assessor observation checklist must be completed to ensure that the candidate has met the required specification and tolerances and this observation checklist must be retained as evidence. Evidence must be gathered under controlled, supervised conditions with candidates working individually to carry out all activities.

Assessment Guidelines

The assessment of this Outcome should be assessed individually apart from all other Outcomes. Candidates should be provided with the specifications for the practical task and assessment should be carried out in a suitable workshop environment.

Administrative Information

Unit code: F8MP 34

Unit title: Wall and Floor Tiling: Environmental Control Systems

Superclass category: TG

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Higher National Unit specification: support notes

Unit title: Wall and Floor Tiling: Environmental Control Systems

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 Wall and Floor Tiling at SCQF level 7.

This Unit is intended to equip candidates with all necessary underpinning knowledge and skills related to preparing and installing environmental control systems.

In Outcome 1, the candidate could be guided to understanding the purpose and importance of environmental control systems. Candidates should also be encouraged to investigate the various types of movement, sound and water control systems used in a Wall and Floor Tiling context. The importance of the correct fixing materials should be stressed with the candidate encouraged to research this using manufacturer's literature and the internet. Candidates should be guided on accurate measurement, sourcing and costing various types of element control systems.

In Outcome 2 candidate's previous knowledge of movement control systems should be developed to help them prepare and install both de-coupling membranes and movement control matting. The importance of accurately following manufacturers' instructions should be emphasised.

In Outcome 3 candidates should be guided on the the importance of preparing and installing acoustic matting to surfaces. The importance of accurately following manufacturers' instructions should be emphasised.

In Outcome 4 candidates should be guided on the setting out and installation of water management and tanking systems. Candidates should follow manufacturers' instructions on installation to both wall and floor areas.

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.

Higher National Unit specification: support notes (cont)

Unit title: Wall and Floor Tiling: Environmental Control Systems

Guidance on the delivery and assessment of this Unit

As part of the Professional Development Award (PDA) in Wall and Floor 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 be delivered through a series of lectures, formative theory and practical examples which will involve the candidate carrying out the activities outlined in the Outcomes. Candidates should be encouraged to access and use visual evidence from the internet, textbooks and notes which illustrate the design, installation requirements movement control, acoustic reduction and water management systems.

Outcome 1 could be delivered with the candidates working individually to generate the relevant evidence. This Outcome provides the candidate with the opportunity to use the internet to access the information required to satisfy the Outcome requirement. Candidates could also be encouraged to word process responses for summative assessments and could use digital images as part of their evidence.

In Outcome 2 candidates will be required to work individually, to generate practical evidence in preparing and installing areas to receive both de-coupling and movement control systems. Guidance and instruction on the installation of both systems should be given by the lecturer. An emphasis should be placed on candidates referring to manufacturers' installation guides for different systems. It is recommended that candidates are introduced to systems from different manufacturers enabling them to evaluate the effectiveness of different systems. 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.

In Outcome 3 candidates will be required to individually generate practical evidence in the preparation and installation of acoustic reduction systems. Guidance and instruction on the installation should be given by the lecturer. An emphasis should be placed on candidates referring to manufacturers' installation guides for different systems. It is recommended that candidates are introduced to systems from different manufacturers enabling them to evaluate the effectiveness of different systems. 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.

In Outcome 4 candidates will be required to individually generate practical evidence in the preparation and installation of water management systems. Guidance and instruction on the installation of these systems should be given by the lecturer. An emphasis should be placed on candidates referring to manufacturers' installation guides for different systems. It is recommended that candidates are introduced to systems from different manufacturers enabling them to evaluate the effectiveness of different systems. 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: Wall and Floor Tiling: Environmental Control Systems

If feasible, site visits or information about modern and potential future methods of 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.

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

Opportunities for developing Core Skills

There are opportunities to develop the Core Skill of *Problem Solving* at SCQF level 5. 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.

There are opportunities to develop the Core Skill of *Communication* at SCQF level 5 throughout this Unit by the candidates describing and specifying environmental control systems. In the workshop candidates will interpret specifications and workshop drawings. As candidates complete practical tasks, they should be expected to communicate with others using the correct terminology, tone and style suited to the workplace.

There are opportunities to develop the Core Skill of *Information and Communication Technology* at SCQF level 4 in Outcome 1 where the candidates will be encouraged to access information through internet research particularly in the specification of environmental control systems. They could also be encouraged to word process responses for formative assessments and could use digital images as part of their evidence.

There are opportunities to develop the Core Skill of *Numeracy* at SCQF level 4 through the interpretation of information from working drawings and the practical use of calculation and measuring scales.

Higher National Unit specification: support notes (cont)

Unit title: Wall and Floor Tiling: Environmental Control Systems

Open learning

Although this Unit could be delivered in part by distance learning, it would require considerable 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 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: Wall and Floor Tiling: Environmental Control Systems

This Unit has been designed to further your career in the construction industry by developing your competencies and improving your knowledge of Environmental Control Systems used in Wall and Floor Tiling. It has been written as part of the Professional Development Award (PDA) in Wall and Floor Tiling at SCQF level 7, and is intended for experienced crafts persons working in the construction industry as Wall and Floor Tilers.

The Unit will help develop your underpinning knowledge and skills related to the installation of movement control and acoustic reduction systems. The Unit will also help develop your skills in the installation of water management and tanking systems.

You will be assessed on your knowledge of circumstances where movement control systems are required and on the ability to specify acoustic and water management and tanking systems in a wall and floor tiling context.

You will be assessed practically in a workshop environment on preparing the surface area and installing movement control and acoustic reduction systems to a given specification. You will also be assessed on the preparation and installation of water management and tanking systems. Specifications will be given to you prior to undertaking the practical assessments.

There are opportunities within the Unit to develop your Core Skills *Problem Solving* at SCQF level 5, *Communication* at SCQF level 5, *Information and Communication Technology* and *Numeracy* 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.