



National Unit Specification

General information

Unit title: Roofing: External Cement Work Bands and Artificial Stonework (SCQF level 6)

Unit code: HK54 46

Superclass: TG

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Unit purpose

This unit is suitable for learners working towards a Modern Apprenticeship in Roofing Occupations and will develop the learners craft skills in external cement work to form bands and artificial stonework. This unit is designed to provide learners with competence in the use of tools and equipment for external rendering materials. It is also designed to enable learners to develop their knowledge and understanding in external cement work terminology, techniques and sequencing of operations.

Outcomes

- 1 Demonstrate knowledge and understanding of terminology, components, techniques and sequence of operations for the application of external cement work to create dry and wet dash applications incorporating plain floated and dry dash ingoes and soffits.
- 2 Prepare backgrounds for the application of dry dash, wet dash and artificial stonework.
- 3 Produce plain float cement render and dry dash application to ingoes and soffits at window openings.
- 4 Set out and form cement render to represent square sneck stonework to either picked or bullnose finishes.

Credit points and level

1 National Unit credit at SCQF level 6 (6 SCQF credit points at SCQF level 6).

Recommended entry to the unit

While entry is at the discretion of the centre, learners 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.

National unit specification: General information (cont)

Unit title: Roofing: External Cement Work Bands and Artificial Stonework (SCQF level 6)

Core Skills

Achievement of this unit gives automatic certification of the following Core Skills component:

Complete Core Skill	None
Core Skill component	Critical Thinking at SCQF level 4

There are also opportunities to develop aspects of Core Skills which are highlighted in the support notes of this unit specification.

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.

The Training and Assessment Programme (TAP's) for this unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the TAP to ensure a comparable standard. A list of existing TAP's is available to download from SQA's website (<http://www.sqa.org.uk/sqa/46233.2769.html>).

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

National unit specification: Statement of standards

Unit title: Roofing: External Cement Work Bands and Artificial Stonework (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 terminology, components, techniques and sequence of operations for the application of external cement work to create dry and wet dash finishes incorporating plain floated and dry dash ingoes and soffits.

Performance criteria

- (a) Define the terminology related to external cement work and artificial stonework.
- (b) Describe the sequence of operations required for external cement work including returns to ingoes and soffits and to artificial stonework.
- (c) State basic health and safety requirements related to external cement work.

Outcome 2

Prepare backgrounds for the application of external dry dash, wet dash and artificial stonework.

Performance criteria

- (a) Prepare backgrounds prior to the application of external cement work.
- (b) Apply a cement render first coat and form a scratch finish/mechanical key.
- (c) Apply a dry and wet dash finish to wall area.
- (c) Comply with current health and safety requirements throughout activity.

Outcome 3

Produce plain float cement render and dry dash application to ingoes and soffits at window openings.

Performance criteria

- (a) Apply a cement render first coat and form a scratch coat/mechanical key at window opening.
- (b) Form a smooth float finish to ingoes and soffits.
- (c) Form a dry dash finish to ingoes and soffits.
- (d) Comply with current health and safety requirements throughout activity.

National unit specification: Statement of standards (cont)

Unit title: Roofing: External Cement Work Bands and Artificial Stonework (SCQF level 6)

Outcome 4

Set out and form cement render to represent square sneck stonework to either picked or bullnose finishes.

Performance criteria

- (a) Apply cement render and form either a picked or bullnose stonework finish.
- (b) Comply with current health and safety requirements throughout activity.

Evidence requirements for this unit

Evidence is required to demonstrate that the learners 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 learner can define and describe the terminology, components, techniques and sequence of operations associated with external cement finishes to form artificial stonework, smooth plain floated and dry dashed ingoes and soffits. 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 learner has individually met the standards specified in the performance criteria and summary of standards.

Learners will be observed to show that they can achieve the following through the delivery of the unit:

- ◆ Measure area accurately
- ◆ Store and stack external render materials, accessories, tools and equipment
- ◆ Prepare backgrounds for external cement textured finishes
- ◆ Set out and fix bellcast bead and stop beads
- ◆ Control suction of backgrounds prior to rendering
- ◆ Gauge and mix mortar to required specification
- ◆ Set-out and apply mortar to form returns at ingoes and soffits to required specification
- ◆ Set-out and apply mortar to form artificial ashlar stonework to required specification
- ◆ Protect and clean down work areas
- ◆ Minimise wastage of materials to improve sustainability and efficiency
- ◆ Behave in a safe manner at all times

Competence will be based on learners completing practical activities in accordance with the stated tolerances.

National unit specification: Statement of standards (cont)

Unit title: Roofing: External Cement Work Bands and Artificial Stonework (SCQF level 6)

Summary of Standards for External Cement Work and Artificial Stonework (working towards industrial tolerances)

Background preparation

- ◆ Prepares background - blocks/bricks Thoroughly cleans wall area
- ◆ Control suction — wetting Wall area evenly damped down throughout
- ◆ Apply first coat Free from heavy trowel marks
- ◆ First coat applied evenly 8 mm - 16 mm throughout
- ◆ Form mechanical key (scratch) Horizontal scratched 6–8 mm deep

External Cement Work Windows

- ◆ Form ingoes and soffit (float) Even texture and width throughout
- ◆ Form arrises Sharp throughout

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
- ◆ Materials Stacked correctly at all times
- ◆ Tools Cleaned and stored safely at end of working day

In addition to these standards the following Summary of Standards for Artificial Stonework (working towards industrial tolerances) also apply:

Background preparation

- ◆ Form bellcast Fixed level and secure

External Cement Work Artificial Stonework, square neck stonework to picked or bullnose finishes

- ◆ Form stonework blocks Suitably bonded and plumb ± 8 mm
- ◆ Form picked face - stonework Even finish throughout
- ◆ Form bullnose - stonework Even finish throughout
- ◆ Form bullnose - stonework Free from holes
- ◆ Form bullnose - stonework Sand faced texture throughout
- ◆ Pointing stonework Even throughout

These evidence requirements will be met by the completion of the Roof Slating, Tiling and Cement Work Training and Assessment Programme (TAP) that provides detailed assessment material for this unit.

National Unit Specification: support notes

UNIT Roofing: External Cement Work Bands and Artificial Stonework (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 learners 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 learners 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 learners work and area of responsibility.

The successful completion of this unit will help provide learners with the required underpinning knowledge and skills relating to the terminology, preparation and application of external cement bands including returns at ingoes and soffits and artificial stonework.

The context of this unit allows for a holistic integrated approach into other Units within the PDA in Roof Slating, Tiling and Cement Work. Therefore there are opportunities to integrate this unit with aspects of *Roofing: External Cement Work Textured Finishes* (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 approaches to delivery of 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 learner 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.

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

National Unit Specification: support notes (cont)

UNIT Roofing: External Cement Work Bands and Artificial Stonework (SCQF level 6)

Outcome 1

This outcome should introduce the learner into the terminology, components techniques and sequence of operations of artificial stonework.

Terminology and components could include those indicated below:

Terminology: Lintel, sill, arris, ingoe, soffit, blocking out, ashlar stonework, square sneck stonework, picked and bullnose finishes.

Components: Bellcast bead, stop bead.

It would be beneficial for learners to sketch various elements related to external cement bands including returns at ingoes and soffits and artificial stonework. This will help reinforce learners' underpinning knowledge for this unit.

Outcomes 2, 3 and 4

Learners should be encouraged in self and peer evaluation of work and achievement of standards.

The learner should be provided with a working drawing and specification outlining the content and performance criteria for the practical activities attempted.

Learners should be made fully aware of current regulations and legislation in relation the external cement work activities contained within this unit.

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

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

Lecturers should provide learners 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: External Cement Bands and Artificial Stonework
(SCQF level 6)

Guidance on approached to assessment for this unit

Unit number F7A2 12 of the Roof Slating, Tiling and Cement Work Training and Assessment Programme (TAP) provide 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 learners will be given as much practice as possible, prior to being set assessment tasks.

For Outcome 1 a suitable method of assessing the learner's knowledge and understanding of external cement work terminology, components and sequence of operations for external cement bands including returns at ingoes and soffits and artificial stonework would be through a question paper incorporating multiple choice questions.

For Outcomes 2, 3 and 4 the learner's ability to set out and form external cement bands including returns at ingoes and soffits and artificial stonework will be assessed through practical activities. An assessor observation checklist can be used to ensure and record that the learners have met the given standards and tolerances during the practical activity.

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 social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for Core Skill development

There are opportunities to develop aspects of the Core Skill of Problem Solving at SCQF level 4. Learners 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 external cement work calculations for area and material estimating.

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

Learners 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.

This unit has the Critical Thinking component of Problem Solving embedded in it. This means that when learners achieve the unit, their Core Skills profile will also be updated to show they have achieved Critical Thinking at SCQF level 4.

History of changes to unit

Version	Description of change	Date
02	Core Skills component Critical Thinking at SCQF level 4 embedded.	01/06/17

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General information for learners

Unit title: Roofing: External Cement Work Bands and Artificial Stonework (SCQF level 6)

This unit is aimed at those who are interested in pursuing a career in roofing. You will gain an understanding of the terminology and sequences of external cement work and artificial stonework.

You will also be provided with the knowledge to allow you to appreciate the reasons for carrying out the practical work in the manner directed and the reasons for using specific tools, materials, components and equipment.

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. Safety working practices will be looked at in accordance with current safety codes of practice and regulations.

There will be a series of training exercises followed by some practical task based assessment and multi choice knowledge assessment. Completion of the unit will provide you with the basic skills necessary to enable you to progress to more complex aspects of external cement work and artificial stonework which in turn will further develop your skills and knowledge.

There are opportunities to develop aspects of the Core Skill of Problem Solving at SCQF level 4. Learners 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.

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